PERCEPTIONS OF CARE IN THE MEDICARE PROGRAM: AN ANALYSIS COMPARING EXPERIENCES OF CARE OF MEDICARE BENEFICIARIES WITH A DIAGNOSIS OF DIABETES ENROLLED IN TRADITIONAL MEDICARE AND MEDICARE ADVANTAGE

by

Memuna Ifedirah

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Abstract

Background: The Medicare program offers two main insurance options: Traditional Fee-For-Service (FFS) Medicare and Medicare Advantage (MA). The primary purpose of the two options is to provide healthcare choices to Medicare beneficiaries; however, their structural and cost differences could result in quite different experiences for beneficiaries obtaining care within each option. This research will look at differences in experiences of care between beneficiaries that are enrolled in MA and FFS with a diagnosis of diabetes.

Methods: This study utilizes data collected in the 2009 Medicare Consumer Assessment of Healthcare Providers and Systems (MCAHPS) survey. The 2009 MCAHPS survey includes a nationally representative sample of Medicare beneficiaries who were surveyed about different aspects of the health care experiences. This study will focus on Medicare beneficiaries who reported their doctor telling them they have diabetes. The study will utilize Univariate and Multivariable logistic regression models to examine the relationship of experience of care outcomes between beneficiaries in FFS and MA programs taking into account demographic and health characteristics of diabetic beneficiaries.

Results: Results show that Medicare beneficiaries who are White are more likely to report positive experiences for all the outcome variables in the analyses with and without taking demographic and health variables into account. Enrollees with more than a high school education report better experience with understanding a doctor's explanation than those with a high school education or less; older enrollees that are 65 and older report better experiences for all outcome variables than enrollees who are younger than 65.

There is not a statistically significant difference in the way that males and females report experiences of care for the outcome variables.

Conclusion: This is the first time a study has been done looking at experiences of care for Medicare beneficiaries with a diagnosis of diabetes enrolled in MA and FFS Medicare options. The information generated by this research will be valuable to policy makers, quality improvement organizations, and other stakeholders as they explore and refine quality improvement strategies for patient experience of care, specifically for patient with chronic conditions like diabetes, across the Medicare program.

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Thesis Readers: Marie Diener-West, PhD

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Selected Abbreviation and Acronyms

MCAHPS: Medicare Consumer Assessment of Healthcare Providers and Systems

CMS: Centers for Medicare and Medicaid Services

FFS: Fee-for-Service

MA: Medicare Advantage

MA-PD: Medicare Advantage Prescription Drugs

FFS-PD: Fee-for-Service Prescription Drugs

Chapter 1. Introduction

1.1 Background

In 2001, the Institute of Medicine (IOM) identified patient-centeredness as one of six aims for improving the quality of U.S. health care in *Crossing the Quality Chas [IOM, 2001]*. Since that time, there has been a growing movement towards measuring patients' experiences with care. The IOM defined patient centeredness as "health care that establishes a partnership among practitioners, patients, and their families to ensure that decisions respect patients' wants, needs, and preferences and that patients have the education and support they need to make decisions and participate in their own care [IOM, 2001]. For many years, the Centers for Medicare and Medicaid Services (CMS) have been measuring patient experience through the MCAHPS (Medicare Consumer Assessment of Healthcare Provider Systems) survey. The results of the MCAHPS survey are publicly reported on the Medicare.Gov website to help patients assess provider performance and make informed decisions when choosing providers. Publicly reporting the results of the survey fosters transparency and accountability among health care providers and sets benchmarks and incentives for improving care.

Over the years, CMS has used the survey to examine characteristics of Medicare enrollees and their experience of care within the two insurance options of the Medicare program. One option is Fee-for-Service (FFS) Medicare, where beneficiaries are free to choose their own physicians and other providers, but they also are solely responsible for navigating the health care system. The other option is Medicare Advantage private plans, where enrollees have broader benefits with lower out-of-pocket costs, but they may be constrained in their provider choices and health care options. Studies conducted in the

last decade have used the survey to examine quality of care in the Medicare program and found that Medicare Fee-for-Service (FFS) and Medicare Advantage (MA) beneficiaries experienced similar hospital admission rates for colon cancer and stroke hospital admissions, comparable admission rates for ambulatory care sensitive conditions, and comparable access to ambulatory care services (Brown 1993, Harlow and McCall 2003). Managed care (MA) beneficiaries were found to be more likely than FFS beneficiaries to receive preventive services including influenza and pneumococcal vaccinations (Landon et al. 2004, Keyhani et al. 2007). However, FFS beneficiaries were found to be more satisfied with their overall care (Landon et al. 2004, Miller and Luft 1997, 2002). A study comparing Healthcare Effectiveness Data and Information Set (HEDIS) quality of care measures for MA and FFS, found that, low-income and minority status are associated with poorer preventive care outcomes in both FFS and MA (Zaslavsky et al. 2000).

A more focused examination of similarities and differences in quality of care between MA and FFS options requires the examination of experience with care by individuals with similar health disorders. This research compares patient reported experience of care between Medicare beneficiaries enrolling in MA and FFS programs with a diagnosis of diabetes. Survey responses to experience with care questions were obtained from those beneficiaries who reported that they had a usual source of care: (1) were seen by a doctor in the previous six months, (2) had made an appointment to see a specialist in previous six months (3) had tried to obtain any kind of care, tests, or treatment through Medicare in the previous six months, (4) or had tried to fill a prescription through Medicare Part D in the previous 6 months among those that have Part D.

The beneficiaries with diabetes who report that they did not receive one or more services, as well as those who report worse experiences of care may be the most policy relevant groups in this research given the importance of continuity of care, periodic testing, specialty services, and use of medications in the management of diabetes. The primary source of data is the 2009 Medicare Consumer Assessment of Health Providers and Systems Survey (MCAHPS).

Evaluating quality of care and the beneficiary's experience with care in the Medicare population is complex. The work by the Dartmouth Atlas has documented wide geographical variations in different parts of the country in the receipt of evidence-based care and in level and type of health care utilization for Medicare beneficiaries (Wennberg et al. 2008). A recent study found that the geographic "disparities" in use of evidence-based services are more pronounced than are racial disparities in care (Fisher et al. 2008). Studies of variation in services have identified many correlates, including community practice patterns and physician supply, after adjusting for population characteristics. These studies suggest there are many sources of variation in utilization and quality beyond differences between MA or FFS models of care.

1.2 Defining Patient Experience of Care

Patient experience surveys elicit reports from patients on what they did or did not experience in their interactions with providers and the health care system. The literature suggest that patient experience of care involves aspects of care experience such as waiting times, communication with health-care providers, providing information to patients, emotional and physical support, and involvement of family and friends; all of which may be potential priorities for quality improvement.

1.3 Overview of the Medicare Program

Medicare enrollees have the option to choose the Fee-for-Service (FFS) program, in which a majority of beneficiaries are enrolled (75% or 37million), either with or without a freestanding prescription drug plan (Part D). Enrollees can also enroll in a Medicare Advantage (MA) plan, whereby managed care plans are under contract with CMS, with or without a prescription drug option, to provide services to beneficiaries. These MA plans include: Health Maintenance Organizations (HMOs), Local Preferred Provider Organizations (PPOs), Private Fee for Service (PFFS) plans, Special Needs Plans (SNPs), and Regional PPOs. These various Medicare options have structural differences that could result in different experiences for beneficiaries. For example, in FFS Medicare, beneficiaries can choose their own providers, but they also are solely responsible for navigating the health care system. Enrollees in the MA plans have expanded benefits at lower out-of-pocket costs, but they are constrained in their provider choices and health care options (KFF.org). Given the differences in MA plan offerings, beneficiaries in MA may have quite different experiences depending on the plans they choose. The following table presents a comparison of the two options of Medicare in terms of coverage and costs.

Table 1.1: Comparison of Medicare FFS and MA Coverage and Out-of-Pocket Costs in 2012

Coverage Type	Covered Services	Premiums	Deductibles	Co-Insurance
FFS	Part A – *Hospital Insurance – everyone that's qualified is automatically enrolled hospital services skilled nursing facility,*	*No premiums*	*$1,156 for an inpatient stay*	*$289 per day for extended inpatient stays*

	home health, and hospice care			
	Part B – Supplementary Medical Insurance - Voluntary physician visits, Preventive services such as mammography and colorectal screening. ambulance services, clinical laboratory services durable medical equipment (such as wheelchairs and oxygen) kidney supplies and services outpatient mental health care diagnostic tests, such as x-rays.	Income related monthly premium ranging from $99.90 to $319.70.60	$ 140	Most require a 20% co insurance
	Part D - Prescription Drug Coverage - Voluntary	2012 Part D National Base Beneficiary Premium - $31 plus income-related monthly adjusted amount ranging from $11.60 - $66.40).	Up to $320	25 % coinsurance on covered drugs up to an initial coverage limit
MA (Part C)	Provide all benefits covered under traditional Medicare plans including Part A and Part B and its premiums.	Most Part C plans do not have additional monthly premium. However, for those that do, it varies by plan up to about	Up to $320	25 % coinsurance on covered drugs up to an initial coverage limit
	Provide different benefit package to beneficiaries and			

	payment systems to providers	$100.		
	Most provide Part D coverage (MA-PD) as discussed in the FFS group above.	Those enrolled in MA-PD pay average monthly premium of $56.		
	Enrollees can choose not to enroll in Part D (MA-only)			
	Cover additional benefits not covered by traditional Medicare, such as routine vision and dental care			

*** *Source: Medicare & You. Centers for Medicare and Medicaid Services (CMS). 2012 Available at http://www.medicare.gov/Publications/Pubs/pdf/10050.pdf*

1.4 Patient Experience with Care as a Means of Monitoring Quality of Care in the Medicare Program:

As the table above illustrates, the two Medicare options have coverage and out-of-pocket cost differences that could result in different experiences for beneficiaries obtaining care within each option. For example, 2009 enrollees in FFS Medicare had access to a limited number of preventative services covered by Medicare, mainly mammography and colorectal screening, where those enrolled in MA have access to additional benefits not covered by traditional Medicare, such as routine vision and dental care. Note, FFS Medicare now covers a full range of preventive services since passage of the Affordable Care Act. Also, beneficiaries enrolled in MA plans that offer a prescription drug option are limited to that plan's PD coverage where those FFS enrollees can pick from the full array of standalone PD plans.

1.5 Diabetes Mellitus: Prevalence, Outcome, Cost, and Treatment Diabetes mellitus is one of the more prevalent chronic disorders in the western world and the prevalence is increasing (Narayan et al. 2003). The number of individuals in the United States with diagnosed diabetes is expected to increase by 165% between 2000 and 2050, with the fastest increases occurring in older and minority subpopulations (Narayan et al. 2003). The disorder is a metabolic disorder resulting from a defect in insulin secretion, insulin action, or both. A consequence is chronic hyperglycemia (i.e. elevated levels of plasma glucose) with disturbances of carbohydrate, fat and protein metabolism. Although the onset of type 2 diabetes is usually less dramatic than that of type 1, both types of diabetes carry a risk of disabling, yet potentially preventable complications (DCCT 1993). Diabetes affects large numbers of people across the range of racial and ethnic groups and at all social and economic levels. It is estimated that 25.6 million people in the United States age 20 and above have diabetes (Diabetes.org, 2010). According to the fact sheet on Diabetes.org, of people that are age 65 and over, 10.9 million, or 26.9% of all people in this age group have diabetes; 13.0 million, or 11.8% of all men and 12.6 million, or 10.8 % of all females aged 20 years or older have diabetes. There are race and ethnic differences in prevalence of diagnosed diabetes also. Data from the 2011 National Diabetes Fact Sheet for people diagnosed with diabetes, aged 20 years or older include the following prevalence by race/ethnicity: 7.1% of non-Hispanic Whites, 8.4% of Asian Americans, 12.6% of non-Hispanic blacks, 11.8% of Hispanics. About two million new cases of diabetes were diagnosed in people aged 20 years and older in 2010. (Diabetes.org).

Complications from diabetes can be delayed or prevented through good clinical care and patient self-management. People with diabetes are two to four times more likely to develop cardiovascular disease than people without diabetes, making it the most common complication of diabetes (IDF 2001). In the United States, diabetes is the most common cause of blindness among working-age adults, the most common cause of non-traumatic amputations and end-stage renal disease, and the sixth most common cause of death (Williamson et al. 2004). The economic and human cost of the disease is devastating. In 2007, diabetes was listed as the underlying cause on 71,382 death certificates and was listed as a contributing factor on an additional 160,022 death certificates. This means that diabetes contributed to a total of 231,404 deaths (Diabetes.org). Taking into account age and sex distribution among persons with diabetes, the total cost of diabetes in the U.S., including disability, work loss, and premature mortality, was estimated to be $174 billion in 2007 (Bojadzieyski et al 2011). The average medical expenditures among people with diagnosed diabetes were 2.3 times higher than expenditures for persons without diabetes (Diabetes.org).

Nutritional intake and modification of lifestyle have been found to be the cornerstones for treating type 2 diabetes. Successful management of diabetes generally requires ongoing education and support to equip people with the knowledge, skills, attitudes and motivation required to manage their diabetes care effectively (WHO, 1998). A number of research studies have found that effective management of diabetes lies almost entirely in the hands of the patient who lives with the condition (The Cochrane Collaboration 2009). There is increasing evidence that people with diabetes can improve their self-efficacy and general health once they have been empowered to take the lead in managing their chronic

disease (The Cochrane Collaboration 2009). Physicians reporting that they discussed content areas of diabetes self-care with their patients were found to have better agreement on treatment strategies with their patients. Better agreement on treatment goals and strategies was associated both with greater patient self-efficacy and self-management of diabetes (Heisler et al, 2003).

Improving care for more than one-quarter of Medicare beneficiaries with diabetes has the potential for reducing total costs to Medicare, as well as for improving the lives of these beneficiaries. The costs, medical problems, and quality of life associated with diabetes can be improved if: patients are provided with preventive medical care and timely follow-up that is consistent with recommended standards; patients adhere to recommended medication, self-care regimens, diet; and if providers communicate better with each other and with patients. This is particularly relevant not just to those beneficiaries that report having worse experiences of care, but also for those that report not receiving one or more services within the previous six months.

Because of managed care's incentive to improve the bottom-line, many health plans have adopted care models to better manage care of patient with chronic conditions like diabetes. MA plans have been found to be better at providing programs that are designed to improve patients' adherence to treatment regimens and physician's adherence to professional guidelines. For example, strategies that have been routinely used by MA plans to enhance primary care of patient with diabetes—including home visits, care transitions, and care coordination— have been shown to be effective in reducing hospitalization and readmission rates for Medicare beneficiaries with diabetes (Experton et al, 1999). However, FFS does not provide such services. In FFS in 2009, the coverage

model did not strongly encourage preventive or follow-up care for people with chronic diseases such as diabetes mainly because of the Fee-for-Service structure of traditional Medicare; where providers are paid for clinical services delivered to the patient and not for services related to educate patients about self-management skills that are so essential in the management of diabetes. Thus, in FFS Medicare, there is less incentive for providers to coordinate the care of patient or provide preventive type services that will reduce the need for hospitalization for beneficiaries with diabetes (who may also have other chronic conditions). Given the differences in care models for this population in the Medicare program, one might expect the experience of care to be better for diabetic Medicare beneficiaries enrolled in MA (given its better management of chronic conditions) as compared to those enrolled in FFS.

1.6 Quality of Care in MA vs. FFS

CAHPS is currently the only source of quality of care data, for which the results are publicly reported, on both MA and FFS. The MCAHPS survey captures information on several dimensions of the patient's perspective of care. For this study, four of these dimensions will be explored; these dimensions are: (1) experience with your personal doctor, (2) experience with getting healthcare from specialists, (3) experience with your drug plan (MA-PDs and FFS-PDs), and (4) experience with your health care (tests and treatments received).

A few studies have looked at the relationship between CAHPS survey responses and clinical care and outcomes documented in the medical chart. One study conducted by Schneider et al. (2001) found associations between enrollees' reports about health plans as measured by the Consumer Assessment of Health Providers Systems (CAHPS) survey

and the quality of clinical care as measured by the Healthcare Effectiveness Data and Information Set (HEDIS). The study found that health plans that provided better access and customer service also provided better clinical care based on chart reviews. This finding suggests better patient experience with care is positively related to better clinical care and outcomes. Since the implementation of the Medicare Modernization Act and Part D prescription drug coverage in 2006, research studies have been examining the experience of beneficiaries enrolled in a Medicare prescription drug program. The findings have been reasonably consistent: beneficiaries enrolled in MA plans with a prescription drug benefit (MA-PD) were found to pay less out-of-pocket and to be less likely to delay refilling or not filling prescriptions. They were more likely to need to obtain prior approval to get prescriptions filled when prescribed a brand name drug as compared to FS-PD enrollees (Neuman et al. 2007). MA-PD enrollees were more likely to take advantage of the 90 day mail-order option to fill prescriptions for chronic medications than FS-PD enrollees (Neuman et al. 2007).

There is a growing body of research comparing quality of care between MA and FFS Medicare beneficiaries overall and not limited to individuals with a specific chronic disease, e.g., diabetes. Four published studies were identified that compared quality of care between MA and FFS using the MCAHPS data. One study (Landon et al. 2004), found MA and FFS enrollees to be similar to each other and to the Medicare population as a whole in terms of education, distribution of age, and health status. With respect to experience of care, the study found that FFS enrollees rated the overall care they received from Medicare more highly than MA enrollees rated their care. FFS beneficiaries rated experience with their personal physicians higher than did MA enrollees. Similarly, FFS

enrollees reported fewer problems with getting needed care. The study also found that MA enrollees reported significantly fewer problems with paperwork, getting information, and customer service; as well as more likely to report having received preventive services such as immunizations for influenza and pneumococcus and, if smokers, were more likely to report having received counseling to quit smoking. In addition, the above study found that differences in care experiences between FFS and MA varied across regions of the country.

Another study looking at care experience received by subgroups of sick and healthy beneficiaries in FFS and MA used the 2004 CAHPS data (Keenan et al. 2009). According to this study, no differences in health status were found between enrollees in FFS and MA plans. The study did find that beneficiaries enrolled in MA plans reported less favorable care experiences than those in FFS, both among healthier and less healthy enrollees. These results are consistent with previous research showing care experiences were more favorable in FFS compared with MA overall. The study also found preventive services, specifically the flu, pneumonia and smoking cessation advice, was more common among the less healthy group in MA as compared to FFS.

A third study looking at whether disparities in health care experiences of Medicare beneficiaries differ between MA and traditional Fee-for-Service (FFS) Medicare using the CAHPS data, found that Hispanics and Blacks reported less positive evaluations than Whites in MA (Elliott et. al 2011). The study also found disparities in patient care experience among lower income, less healthy, female, less educated, and Black Medicare beneficiaries, as compared to their counterparts. The disparities tended to be larger (more negative) in MA than in FFS. For the prescription drug program, the study found

disparities for lower income, less healthy, female, less educated, and Black Medicare beneficiaries, relative to their counterparts. Again, the disparities tended to be larger (more negative) in MA-PD than in FFS-PD.

A fourth study looking at geographic variations in CAHPS scores between MA and FFS found significant variation in performance between MA and FFS in the domains of immunization, customer service, and Part D services. For example, California MA consistently exceeded the national MA average, whereas California Fee-for-Service generally lagged the national average as compared to FFS in other parts of the U.S. (Farley et al. 2011). These results are consistent with findings from other studies that found variations in performance across quality measures within the same geographic areas (Landon et al. 2004; Gillies et al. 2006). These variations have been attributed to a number of factors. First, the design of the two health insurance options – where beneficiaries in Fee-for-Service Medicare can choose their physicians and other providers freely, whereas beneficiaries enrolled in the MA plans are limited to receiving care from a specific group practice which may influence patient-reported quality measures . Second, individual MA plans vary in their approaches to working with contracted medical practices and this may affect how patients experience the care they receive from physicians in those practices. For example, studies have found that the structure of a health plan is related to the duration of office visits by elderly patients (Farley et al. 2011) and that a health plan's method of paying physicians (e.g., FFS or salary plus bonus) can affect patients' experiences of care (Farley et al. 2011).

In addition to the literature review above, a number of studies have compared quality of care indicators between Medicare managed care and FFS populations for specific

conditions but not for diabetes. In general, these studies found that Medicare FFS and MA beneficiaries had similar hospital admission rates for colon cancer and stroke, comparable patterns of admission for ambulatory care sensitive conditions, and access to ambulatory care (Brown 1993, Harlow and McCall 2003). Managed care beneficiaries were more likely than FFS beneficiaries to receive influenza and pneumococcal vaccinations and other preventive services (Landon et al. 2004, Keyhani et al. 2007). However, FFS beneficiaries were more satisfied with their care (Landon et al. 2004, Miller and Luft 1997, 2002).

1.7 Contributing Factors to Varying Quality of Care

Previous research has consistently found socio-demographic factors explain significant variations in experiences of care reported in FFS and MA enrollees. Studies have found that Medicare beneficiaries with low socioeconomic status (SES) were more likely to face barriers to receiving quality care (Kapur et al.2006, Elliott et al. 2011). Research on both Medicare FFS and MA plans concluded that seniors with low SES used fewer services than those with high SES. In particular, studies have found that Medicare beneficiaries with low SES, unlike those with higher SES, were less knowledgeable of the benefits of good health behaviors, and hence may have been more likely to experience worse outcomes (Kapur et al.2006). SES has been found to be related to the types of services utilized. For example, better educated persons have been found to prefer receiving care from specialists rather than generalists or primary care physicians (Kapur et al. 2006). While these disparities are found in both FFS and managed care settings, there are differences with regards to the impact of these disparities on quality and experience of care between the two settings. For example, beneficiaries in managed care

who have little or no education have been found to be less successful in navigating the managed care setting. In other words, enrollees in managed care who have little or no education may face worse disparities compared to their counterparts in FFS where providers have little or no incentives to limit use of services (Elliott et. al 2011). Other researchers have supported that minorities in managed care plans have worse outcomes relative to Whites than do those in Medicare FFS (Bonito et al. 2004). The suggested reason has been that managed care limits freedom to seek care from any provider. One study reported that gatekeeping by MA plans was especially detrimental to racial and ethnic minorities who may be seeking to locate culturally appropriate providers (Bonito et al. 2004). On the other hand, one can argue (as in the case of SES) that managed care attributes of facilitating and coordinating access to services may work to the advantage of minority patients by encouraging them to use more routine and preventive services. One can also argue that the lower out-of-pocket costs for patients in managed care (compared to those in FFS) may increase utilization among minorities who tend to have lower incomes. For example, the study by Balsa et al. 2007, found that managed care, relative to FFS, increased the likelihood that Hispanics had a usual source of care (relative to Whites) by 8.6%. In the study, Hispanics in managed care were less likely to delay care for costs reasons, relative to Whites, than Hispanics in FFS.

Disparities in quality of care by gender in the two settings have been found. For example, influenza and pneumococcal immunizations have been reported to be higher in males relative to females in both MA and FFS (Bonito et al. 2004). The study by Bird et al.2007, found gender differences of quality of care for cardiovascular disease and diabetes in Medicare enrollees as it relates to screening, treating, and outcomes for these

conditions. This study found lower quality of care for women despite the fact that women typically have higher rates of physician visits than men.

The Medicare population includes beneficiaries who are disabled and have low incomes. These individuals may be eligible for enrollment in Medicaid in addition to Medicare, usually referred to as being dual eligible. According to the Kaiser Family Foundation website (KFF.org), there were about 9 million dual eligibles in the Medicare program in 2012. These beneficiaries are more likely than other Medicare beneficiaries have a cognitive or mental impairment, to be frail, live with multiple chronic conditions and cost intensive [KFF.org]. With relatively high rates of cognitive limitations, a larger share of dual eligible than other Medicare beneficiaries live in a facility, such as a nursing home or mental health facility (13% of dual eligible versus 1% of non-dual eligibles) [KFF.org]. Note, the MCAHPS does not include beneficiaries in the survey that reside in institutional settings. In 2012, dual eligible beneficiaries comprised 20 percent of the Medicare population (KFF.org). This is consistent with the 2009 Consumer Assessment of Healthcare Provider and System (CAHPS) survey data which consists of 20.3% duals (n=137,847) out of the original sample of 640,413.

Previous studies have shown that dual eligible beneficiaries differ from other Medicare beneficiaries in several ways. For example, they are more likely to have mental and physical impairments, multiple comorbid conditions or more serious health conditions, and are likely to remain in Fee-for-Service Medicare or disenroll from MA plans [Nicholas, 2009]. In addition, these beneficiaries have been found to be more likely to be younger than 65 and to report lower health status compare to other Medicare beneficiaries [KFF.org]. Note, eligibility for Medicare under age 65 is generally limited

to persons with disabilities. They are also more likely to be a member of a racial or ethnic minority [KFF.org].

1.8 Specific Aims and Research Hypotheses

The hypotheses to be examined in this study are discussed below under each of the three specific aims.

Aim 1: Aim 1 examines differences in MA and FFS diabetic patient characteristics including age, gender, race, education, region of residence, self-reported health status, dual eligibility, disability, comorbidity, and proxy assistance. Differences in proportion of diabetic beneficiaries who were asked about experience with care (i.e., reported a usual provider and received care in the prior 6 months) are examined.

Hypothesis 1.1: Proposes that a higher proportion of MA enrollees as compared to FFS with diabetes will be younger, male, lower educational attainment, non-whites and living in urban areas and a higher proportion of FFS enrollees will be disabled, dually eligible for both Medicare and Medicaid, and use proxy help to respond to the survey.

Hypothesis 1.2: Proposes that a higher proportion of MA enrollees as compared to FFS with diabetes will report that their personal doctor explains things in a way that was easier to understand; it was easier to receive a test or treatment; or is was easier to fill a prescription. A higher proportion of FFS enrollees will report greater ease with getting an appointment to see a specialist as compared to MA enrollees.

Aim 2: Examine the relationship of age, race, gender, education, self-reported health status, disability, proxy assistance, region of residence, as well as co-morbidities and dual eligibility and how this varies between MA and FFS, among those who have received one or more services and responded to the patient-reported experience questions.

Hypothesis 2.1: Proposes that after controlling for beneficiary socio-demographics and health characteristics, beneficiaries in both MA and FFS who have a high school education or less will be found to have worse experience of care. In addition, those in MA with a high school education or less will be found to have worse experience of care than those in FFS with a high school education or less.

Hypothesis 2.2: Proposes that beneficiaries in FFS and MA with diabetes who are White will be more likely to report a positive experience with care than non-whites after controlling for socio-demographics and health characteristics.

Hypothesis 2.3: Proposes that Medicare beneficiaries with diabetes who are 65 years and older in both MA and FFS will more frequently report a positive experience with obtaining care than those younger than age 65 after controlling for socio-demographics and health characteristics. Medicare beneficiaries with diabetes who are 75 years and older in both MA and FFS will more frequently report a positive experience with obtaining care than those younger than 75 after controlling for socio-demographics and health characteristics.

Hypothesis 2.4: Proposes that beneficiaries who are females will report less positive experience with their overall care in both MA and FFS than males; females in FFS will report more positive experience with care than those in MA after controlling for socio-demographics and health characteristics.

AIM 3:

Examine the relationship of age, race, gender, education, self-reported health status, region of residence, co-morbidities, dual eligibility, disability, and proxy assistance with survey on filling a prescription in the previous six months; among those who filled prescriptions, examine how the diabetic population reports experience with Part D and how this varies between MA-PD and FFS-PD.

Hypothesis 3.1: Proposes that Medicare enrollees with diabetes who are age 65 or older are expected to be more positive with their experience in obtaining prescription medications than those younger than 65; and in general, those enrollees in MA-PD plans are expected to be more positive than enrollees in FFS-PD after controlling for socio-demographics and health characteristics.

Hypothesis 3.1a: Proposes that Medicare enrollees with diabetes who are age 75 or older are expected to be more positive with their experience in obtaining prescription medications than those younger than 75; after controlling for socio-demographics and health characteristics.

Hypothesis 3.2: Proposes that Whites with diabetes in both MA-PD and FFS-PD are expected to be more likely to have filled a prescription in the previous 6 months and more satisfied with their experience in obtaining prescriptions than non-whites after controlling for all other variables. However, Whites in MA-PD will be more satisfied with their experience in obtaining prescriptions medications than those in free standing PDPs.

Hypothesis 3.3: Proposes that beneficiaries in MA-PD and FFS-PD with diabetes who are more educated are expected to be more satisfied with their experience in obtaining prescriptions than those who are less educated after controlling for other variables.

Chapter 2. Methods

2.1 Data Source

Since 1997, CMS has been collecting information on beneficiaries' experiences with health care for Medicare Advantage (MA) and traditional Fee-for-Service (FFS) Medicare through the Medicare Consumer Assessment of Healthcare Provider and Systems (MCAHPS) survey. The MCAHPS survey is administered annually between February 16th and early June to a national representative random sample of Medicare beneficiaries. It asks about beneficiaries' experiences with care received in the previous six months. In 2007, a new section was added to the survey to obtain information on patient experience with prescription drug plans under the new Medicare Part D benefit, including free-standing prescription drug plans (FS-PD) and those sponsored by a Medicare Advantage plans (MA-PD). The 2009 MCAHPS survey, which is the data source for my study, was mailed to 680,413 beneficiaries. The adjusted response rate, after accounting for both ineligible sample members and non-respondents who were excluded, is 62.3 percent (n=399,317). The 2009 survey includes a question asking if the beneficiary has been told by a doctor that he/she has diabetes or high blood sugar. This study includes all of the respondents who answered "yes" to having been told by their doctor that they had diabetes when surveyed using the 2009 CAHPS survey (n=98,000). This study utilizes data collected in the 2009 Medicare Consumer Assessment of Healthcare Providers and Systems (MCAHPS) survey. The 2009 MCAHPS survey includes a nationally representative sample of Medicare beneficiaries who were surveyed through mailed questionnaires conducted between February 16 and June 16, 2009 asking about experience in the previous six months. The study examines the experience of four

subgroups of Medicare beneficiaries: (1) enrolled in a Medicare Advantage plan with prescription drug coverage (MA-PD), (2) enrolled in Medicare Advantage but the plan does not offer prescription drug coverage (MA-Only), (3) enrolled in Fee-for-Service Medicare and a Medicare drug plan (FFS-PD) and enrolled in Fee-for-Service Medicare and not enrolled in a Medicare drug plan (FFS-Only). Those not enrolled in a Medicare prescription drug (PD) plan may have private pharmacy insurance coverage through a Medi-gap plan or may have no insurance coverage for prescription drugs. Interviews included common questions across all four enrollment categories and questions adapted to the characteristics of the specific subgroup: MA Only, MA-PD, FFS-PD or FFS Only. For example, in the MA-PD Survey there are 82 questions, asking about: Your Health care experience (11 questions), Your Healthcare in the Last 6 Months (11 questions), Your Personal Doctor (7 questions), Getting Healthcare from Specialists (4 questions), Your Medicare Rights (3 questions), Your Prescription Drug Plan (17 questions, asked only of those with PD benefits), and About You (29 questions). **Appendix A,** presents a list of the 2009 MCAHPS survey questions, response categories, and the group(s) expected to answer each question.

The data collection protocol for the 2009 MCAHPS survey included mailing of pre-notification letters, up to two mailings of survey questionnaires, and telephone calls to conduct telephone interviews with those who did not respond to the mail questionnaire. Beneficiaries had to have been continuously enrolled in their plans for at least six months to be eligible for the survey. Beneficiaries also had to be 18 years old or older at the time the sample was drawn. Institutionalized beneficiaries were not eligible for selection and, if identified during data collection, were excluded from the analysis. Some

sample members and their responses were excluded due to being under 18 years of age, deceased, or identified as being in the sample for another Medicare CAHPS survey version, i.e., sample members can only be in the survey for one type of CAHPS survey (for example, cannot be in Home Health CAHPS survey, Hospital CAHPS survey etc). This study and the survey informed consent procedures were approved by the RAND Human Subjects Protection Committee.

For the 2009 CAHPS survey, a total of 680,413 beneficiaries were randomly selected. Of these, 39,889 (5.9%) beneficiaries were classified as ineligible because they were under the age of 18, institutionalized, deceased, mentally or physically incapable, or had a language barrier that prevented them from completing the survey. Also, if the person was selected for another Medicare survey version they were considered ineligible (see Table 2.1). The adjusted response rate, after accounting for both ineligible sample members and non-respondents to the telephone follow-up, is 62.3 percent. There were 98, 726 respondents to the survey who responded positively to the question "has a doctor ever told you that you had diabetes or high blood sugar?" This will be the study group.

Table 2.1. Sample Disposition, 2009 Medicare CAHPS Survey

Disposition	Sample Member Count	Percentage of Sample
Completed survey	399,317	58.69%
Partially completed survey	21,842	3.21%
Ineligible	39,889	5.86%
Institutionalized	3,093	0.46%
Deceased	3,974	0.58%
Did not speak English or Spanish	7,956	1.17%
Mentally or physically unable to respond	24,439	3.59%
Excluded from survey prior to	427	0.06%

fielding[1]		
Non-respondents	219,365	32.24%
Total sample	680,413	100.00%

2.2 Patient-reported Experience Outcome (Dependent) Variables: Four CAHPS Measures of Patient Experience

The outcomes of interest examined in this study are self-reported beneficiary experience with care using scores from the following four CAHPS questions: (1) In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand? (2) In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through Medicare? (3) In the last 6 months, how often was it easy to get appointments with specialists? (4) In the last 6 months, how often was it easy to use Medicare to get the medicines your doctor prescribed? Screening questions preceded each of the four outcome questions to exclude individuals not using each service in the previous six months. If the services have been used, the outcomes questions have four response categories: always=4, usually=3, sometimes=2, and never=1. The first three questions were expected to be answered by all beneficiaries in the MA and FFS groups. The fourth question pertained to only the MA-PD and the FS-PD groups. These four experiences of care questions represent quality indicators associated with successful treatment of chronic conditions. Particularly in the case of diabetes, health care providers would be less likely to achieve positive health outcomes without effective communication with patients about the disease. Good health outcomes correlate to patient adherence to a treatment plan including getting the care, tests and

[1] Please see sample exclusion criteria in text on previous page.

treatment they need. In addition, specialty care will likely be a need to prevention of complications that are associated with diabetes. Further, medications are an essential part of managing this disease for many diabetics and non-adherence to medication can lead to poor outcomes including death.

For each question, a dichotomous variable was created by combining beneficiaries who answered "always" and "usually" in one category and combining beneficiaries who answered "never" or "sometimes" in the second category. One reason for this division is that those beneficiaries who answered "never" or "sometimes" to a particular question are reporting the substantial difficulty or dissatisfaction with the specific service and the numbers of respondents in these two subgroups are substantially smaller than those responding more positively.

2.3 Independent Variables

Table 2.2 shows the major independent variables and their distributional characteristics. These include MA vs. FFS, having a Part D drug plan, and beneficiary characteristics including age, gender, education, race, self-reported health status, co morbidities, dual eligibility for Medicaid, and whether a proxy helped complete the survey.

Table 2.2: Distribution of Characteristics and CMS' Region of Residence for Beneficiaries with Diabetes in 2009 MCAHPS Survey (n=98,726)

Variable	Percent
Age	
18 to 24	.03%
25 to 34	.27%
35 to 44	1.2%
45 to 54	4.3%
55 to 64	10.0%
65 to 69	22.4%
70 to 74	22.3%
75 to 79	17.5%

80 to 84 85 or older Unknown	11.8% 7.6% 2.6%
Race White Black Hispanics Asian Other Native Americans unknown	 75.9% 15.3% 3.8% 2.1% 2.5% 0.4% 0.1%
Gender Males Females Unknown	 42.5% 53.8% 3.8%
Education Did not graduate from high school High school graduate Some college education Have 4 years college or more education Did not provide answer	 29.1% 32.0% 20.4% 13.1% 5.5%
Self-Reported Health Status Excellent Very Good Good fair Poor Unknown	 11.0% 33.0% 35.9% 15.1% 3.5% 1.6%
CMS' Health Plan Region Region 1=Northeast (CT, ME,MA,NH,RI,VT' Region 2 = North Mid-Atlantic (NY,NJ,PR,VI') Region 3 = Mid-Atlantic (DE,DC,MD,PA,VA,WV') Region 4 = South Atlantic (AL,FL,GA,KY,MS,NC,SC,TN) Region 5 = East Midwest	 4.7% 14.1% 9.5% 19.5%

(IL,IN,MI,MN,OH,WI') Region 6 = Southwest (AR,LA,NM,OK,T) Region 7 = Midwest (IA,KS,MO,NE') Region 8= Mountain (CO,MT,ND,SD,WY,UT') Region 9 = Pacific (AZ,CA,HI,NV) Region 10 = Northwest (AK,ID,OR,WA')	16.2% 10.1% 3.9% 3.4% 13.7% 4.9%
Coverage Type Medicare Advantage Fee-For-Service	 54.5% 45.5%

To evaluate the 3 research aims outlined above, this research will examine the relationship between the independent variables and the primary outcome variables outlined above. Table 2.3 identifies the variables, identifies the data source, identifies the specification and identifies the use.

Table 2.3: Description of Study Variables, Data Source, and Measurement

Variable Name	Data Source	Specification	Use
Experience of Care (Dependent)	2009 MCAHPS	Dichotmous 1) Positive Experience 2) Negative Experience	Aim 2 Aim 3
Coverage Type (Independent)	2009 MCAHPS	Dichotomous 1) Fee-For-Service (FFS) 2) Medicare Advantage (MA)	Aim 1 Aim 2 Aim 3
Age (Control)	2009 MCAHPS	Categorical Variable 1) 18 to 24 2) 25 to 34 3) 35 to 44 4) 45 to 54 5) 55 to 64 6) 65 to 69 7) 70 to 74 8) 75 to 79 9) 80 to 84	Aim 1 Aim 2 Aim 3

		10) 85 or older	
Education (Control)	2009 MCAHPS	Categorical Variable Did not graduate from high school High school graduate Some college education Have 4 years college or more education Did not provide answer	Aim 1 Aim 2 Aim 3
Gender (Control)	2009 MCAHPS	Dichotomous Male Female	Aim 1 Aim 2 Aim 3
Race (Control)	2009 MCAHPS	Categorical 1) White 2) Black 3) Hispanics 4) Asian 5) Other 6) Native Americans	Aim 1 Aim 2 Aim 3
Region (Control)	2009 MCAHPS	Categorical Region 1=Northeast (CT, ME,MA,NH,RI,VT' Region 2 = North Mid-Atlantic (NY,NJ,PR,VI') Region 3 = Mid-Atlantic (DE,DC,MD,PA,VA,WV') Region 4 = South Atlantic (AL,FL,GA,KY,MS,NC,SC,TN) Region 5 = East Midwest (IL,IN,MI,MN,OH,WI') Region 6 = Southwest (AR,LA,NM,OK,T) Region 7 = Midwest (IA,KS,MO,NE') Region 8= Mountain (CO,MT,ND,SD,WY,UT') Region 9 = Pacific (AZ,CA,HI,NV) Region 10 = Northwest (AK,ID,OR,WA')	Aim 1 Aim 2 Aim 3
Overall Health	2009	Dichotomous	Aim1

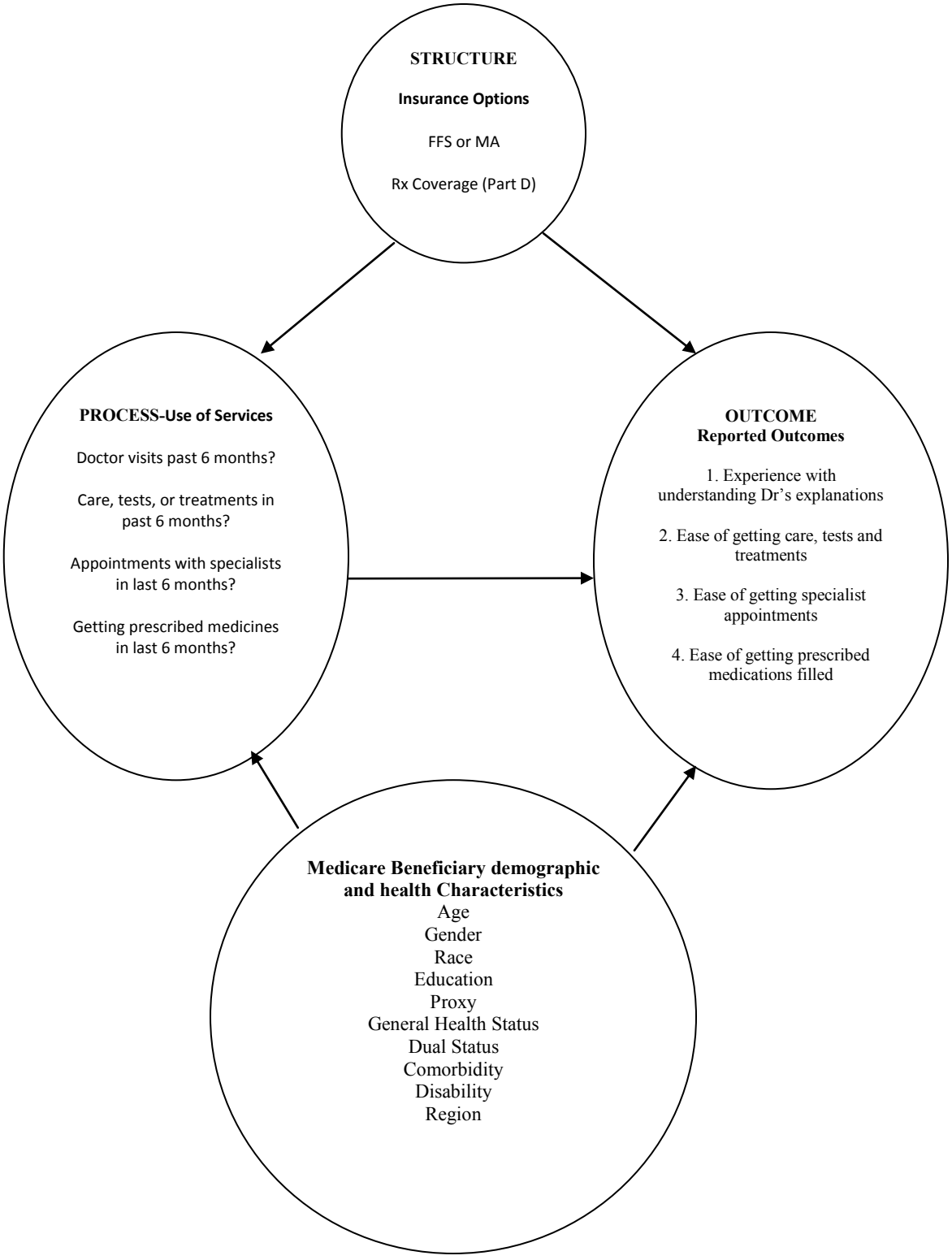
(Control)	MCAHPS	1) Poor, Fair 2) Good, Very Good, Excellent	Aim 2 Aim 3
Proxy Response (Control)	2009 MCAHPS	Dichotomous 1) Yes 2) No	Aim 1 Aim 2 Aim 3
Dual Eligibility (Control)	2009 MCAHPS	Dichotomous 1) Yes 2) No	Aim1 Aim 2 Aim 3
Disability (Control)	2009 MCAHPS	Dichotomous 1) Yes 2) No	
Co-morbidity (Control) Angina Heart attack Cancer COPD	2009 MCAHPS	Dichotomous 1) Yes 2) No	Aim1 Aim 2 Aim 3

2.4 Measuring Experience with Care – A Conceptual Framework

The conceptual framework for measuring patient experience with care applies Donabedian's Structure-Process-Outcome framework for examining quality of care (Figure 1). This study, is examining the influence of key structural characteristics or differences between the two enrollment options of the Medicare program on experience of care for enrollees. As discussed in the overview of the Medicare program above, differences in benefit package and payment policies in the two Medicare options represent structural differences. These structural differences, according to Donabedian, can influence the method by which health care is provided or process of care, and may impact outcome as the consequence of the health care provided.

Structural characteristics, such as insurance option, benefit package, and region of residence can be strongly related to access to health services which may have an impact on outcomes such as experience of care. As the diagram below illustrates, structure is related to process characteristics, such as use of services, in the form of how services are delivered, and the types of services that are covered by insurance and used. Structural aspects such as insurance coverage and benefit design are important in determining what services are accessed, which is expected to influence the process of care. Structure and process characteristics are expected to influence outcomes, such as how satisfied the patient will be with their experiences as they navigate the healthcare system. In summary, the model below suggests that aspects of insurance option such as payment and types of services covered (structure) can influence access to services and how those services are delivered (process) and can impact patient experience of care received (outcome).

Figure 1: Conceptual Framework for Assessing Patient Experience with Care in the Medicare Program



The outcomes variables (Table 2.4) are from questions in the survey regarding "Your Personal Doctor", "Your Healthcare", and "Getting Health Care from Specialists." Responses to these questions are in categories of always=4, usually=3, sometimes=2, and never=1. These questions are asked of all enrollees in MA and FFS plans. As described above, the four response categories are collapsed into two categories: positive experience (always and usually) and negative experience (sometimes and never). The question in the survey regarding "Your Prescription Drug Plan" has response options of always=4, usually=3, sometimes=2, never=1. This question is asked of those who have Part-D coverage and are enrolled in Medicare Advantage (MA-PD) and those who have Part-D coverage and in the Fee-For-Service (FFS-PD) group. Responses are also collapsed into two categories of positive and negative experience. In the analysis, MA-PD and FFS-PD experience with filling prescriptions is compared. Note, there are MA and FFS beneficiaries who are excluded from this comparison if they do not have Part D coverage. Reasons for not having Part D coverage include having a Medi-gap insurance policy that includes pharmacy coverage, or not having pharmacy insurance and not enrolling in Medicare Part D.

Table 2.5 shows the distribution of responses for each outcome question. Note, persons who reported that they had not seen their physician in the previous six months, not had lab tests, not sought care from a specialist, or not filled a prescription through the Part D drug plan were not asked to respond to the outcome question(s). Over the years, studies conducted on the CAHPS measures have demonstrated a high level of reliability and validity (Hargraves et al. 2003; AHRQ.org). Previous analyses of CAHPS data performed

by CMS and other researchers (Elliott et al 2011; Farley et al. 2011) have repeatedly established the construct validity of the CAHPS survey instrument by clearly showing in their analysis that there is a correlation between Medicare insurance option and beneficiary characteristics, and how beneficiaries report their experience of care. The CAHPS survey instruments and reporting formats have undergone rigorous testing for face and content validity, including focus group interviewing, cognitive interviewing, and field-testing. Face and content validity can be established by convening one or more focus groups that include beneficiaries and individuals with subject matter expertise. Given the high degree of reliability and validity of the CAHPS survey, the proposed study is well positioned to examine the relationship between beneficiary experience of care with the two insurance options controlling for socio-demographic factors, including, education, age, gender, race, region of U.S. as well as other covariates that have been known to affect response tendencies.

Table2.4: Screening Questions and Response Categories Used in the Analysis of Experience with Care

Survey Dimension	Question	Response Category
Your Personal Doctor	In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?	Never = 1 Sometimes = 2 Usually = 3 Always = 4
Your Health Care	In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through Medicare?	Never = 1 Sometimes = 2 Usually = 3 Always = 4
Getting Health Care From Specialists	In the last 6 months, how often was it easy to get appointments with specialists?	Never = 1 Sometimes = 2 Usually = 3 Always = 4
Your Prescription Drug Plan	In the last 6 months, how often was it easy to use Medicare to get the medicines your doctor prescribed?	Never = 1 Sometimes = 2 Usually = 3 Always = 4

		I did not use my drug plan to get any prescription medicines in the last 6 months

Table 2.5: Distribution of Enrollee Responses by CAHPS Outcome Questions

Question	Response Category	Distribution of Responses
In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?	Never	824
	Sometimes	4393
	Usually	16372
	Always	60471
	Nonresponse/Not Applicable	16666
In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through Medicare?	Never	1217
	Sometimes	3574
	Usually	14052
	Always	37249
	Nonresponse/Not Applicable	42634
In the last 6 months, how often was it easy to get appointments with specialists?	Never	1167
	Sometimes	4275
	Usually	15219
	Always	30854
	Nonresponse/Not Applicable	47211
In the last 6 months, how often was it easy to use Medicare to get the medicines your doctor prescribed?	Never	252
	Sometimes	769
	Usually	3003
	Always	16328
	I did not use my drug plan to get any prescription medicines in the last 6 months	
	/Nonresponse/ Not Applicable	78374

As described above the dependent outcome variables are dichotomous variables. The advantage of the dichotomous classification is that it defines clear differences in experience between beneficiaries who report a lack of satisfaction with their experience of care and those who expressed a level of satisfaction with their experience of care. The disadvantage is that it has not yet been formally validated

2.5 Analytic Approach

The outcomes of primary interest in this study are the four patient experience outcome measures from the 2009 CAHPS survey. These outcome variables have been collapsed into a dichotomous variable, i.e. enrollees having reported some level of positive experience (always and usually) or a negative experience (sometimes and never) with access to care and services. To address the hypotheses of this study, the analysis applies multivariable logistic regression to models to examine the relationships of independent variables and covariates to each of the four dependent variables of patient reported experience of care. Further, additional descriptive statistics of all of the variables to be used in this study will be performed to ensure that there are sufficient observations in all the variables being used in this study. Missing data were excluded from the analysis (see section on Methods).

Evaluation of Aim 1: To examine differences in proportions of diabetic patient characteristics between FFS and MA, as well as differences in proportions of how the MA and FFS groups who received services in the previous 6 months and were eligible to respond to the four experience of care measures or dependent variables. The Chi-square test is used to determine if a statistically significant difference in proportions is present. If the p-value is less than or equal 0.05, results of the test will be considered statistically

significant. The same approach is used to examine differences between MA and FFS groups on individual demographic and health characteristics, including age, gender, race, comorbidity, dual status, disability, proxy assistance, health status, region, and education.

Evaluation of Aim 2: Logistic regression is used to examine each of the outcomes with type of plan (MA or FFS) and socio-demographic and health characteristics of the respondent as independent variables. Because factors contributing to differences of outcomes may be related to differences in insurance coverage as well as demographic, social and health characteristics, the purpose of using a multivariable logistic regression is to determine whether the pattern of findings from the univariate analyses in aim 1 held when controlling for these differences. The statistical model is:

$$\text{Logit}[\, P(\text{Experience} = 1|0)] = \beta 0 + \beta 1 X1_i + \beta 2 X2_i \ ...+... \ \beta k Xk_i$$

The dichotomous dependent variable describes the beneficiary's experience as positive or negative. The coefficients in this model can be interpreted as being the change in the log odds of a beneficiary reporting the level of their experience with care for each unit change in the covariate conditioned on all of the other covariates in the model. A statistically significant negative coefficient associated with indicators of lower education in the *education* categorical variable in MA as compared to FFS would provide evidence supporting the hypothesis that beneficiaries with lower levels of educational attainment had more negative experience with care after controlling for socio-demographic and health characteristics (Hypothesis 2.1). Similarly, a statistically significant positive coefficient associated with White race in both MA and FFS would provide evidence

supporting Hypothesis 2.2, that Whites were more likely to report positive experience. A significant negative coefficient on the age variable for MA compared to FFS will indicate evidence for the hypothesis that beneficiaries in MA who are 75 and older are likely to have a negative experience with obtaining care compared to those in FFS (Hypothesis 2.3). A significant negative coefficient for female gender in MA and FFS groups combined would provide evidence of a negative experience for females compared to males across both types of insurance. A significant negative coefficient for females in MA as compared to FFS would provide evidence of a more negative experience for females in MA as compared to females in FFS (Hypothesis 2.4). Results of these analyses will provide the basis for addressing Aim 2.

Evaluation of Aim 3: A multivariable logistic regression model is used to examine Aim 3 and the outcomes report for Part D medication insurance coverage among those enrolled in MA-PD or FFS-PD. The analytic model is:

$$\text{Logit}\,[(\text{Part D Experience} = 1|0)] = \beta 0 + \beta 1 X1_i + \beta 2 X2_i \ \ ...+... \ \beta k Xk_i$$

The dichotomous dependent variable is the beneficiary's reported experience with a Part D insurance plan. The coefficients in this model can be interpreted as being the change in the log-odds between beneficiaries reporting positive experience with their Part D plan versus more negative experiences, conditioned on all the covariates in the model.
A statistically negative coefficient for age younger than 65 in both MA and FFS; and also for those younger than 65 for MA-PD compared to stand alone PDPs provides evidence

that younger beneficiaries had a more negative experience with obtaining medications than those over age 65 (Hypothesis 3.1). *Similarly* a statistically significant positive coefficient for White in both MA-PD and FFS-PD provides evidence that Whites as compared to non-Whites reported a more positive experience with obtaining prescriptions in the two insurance options (Hypothesis 3.2). A statistically negative coefficient for graduating from high school or less as compared to more than a high school education would provide evidence that lower levels of educational attainment is associated with more negative experiences in obtaining prescription (Hypothesis 3.3). Results of these analyses address the hypotheses in Aim 3.

2.6 Confounding

Multivariable models may include independent variables that are confounders, correlated with the dependent variable and one or more independent variables. The presence of a confounding variable will cause the coefficient of the correlated independent variable to change, possibly losing statistical significance. A systematic analysis of potential confounding was completed for the multivariable logistic models and the results are in Appendix B. The effects of confounding are discussed with the results of the logistic model analyses.

Chapter 3. Specific Results Aim 1

Aim 1 examines differences in MA and FFS diabetic patient characteristics including age, gender, race, education, region of residence, self-reported health status, dual eligibility, disability, comorbidity, and proxy assistance. Differences in proportion of diabetic beneficiaries responding to the four experiences of care questions, the dependent variables, are examined.

Aim 1 consists of two hypotheses. Hypothesis 1.1 states that a higher proportion of MA enrollees as compared to FFS with diabetes will be younger, male, lower educational attainment, non-whites and living in urban areas. It is also hypothesized that a higher proportion of FFS enrollees will be disabled, dually eligible for both Medicare and Medicaid, and have used proxy help to respond to the survey.

The second hypothesis of Aim 1 (Hypothesis 1.2) states that a higher proportion of MA enrollees as compared to FFS with diabetes reported that their personal doctor explained things in a way that was easy to understand; had easy access to tests or treatment; or was easy to fill a prescription. It is hypothesized that a higher proportion of FFS enrollees reported more ease with getting an appointment to see a specialist as compared to MA enrollees.

Analysis of Hypothesis 1.1 - A higher proportion of MA enrollees as compared to FFS with diabetes will be younger, male, lower educational attainment, non-white and living in urban areas. However, a higher proportion of FFS enrollees will be disabled, dually eligible for both Medicare and Medicaid, and use proxy help to respond to the survey.

3.1 Age

Table 3.1 shows CMS' ten age categories and corresponding frequency for the diabetic population in the sample; Table 3.2 shows the distribution of the sample by CMS' age category and by insurance type. For purposes of this analysis, age will be grouped into three categories (Table 3.3): < 65 years, 65-74, and 75 years and older. Previous research has indicated that Medicare beneficiaries younger than 65 years old seem to have different experiences with Medicare as compared to age 75 and above Medicare beneficiaries. These differences may vary by enrollment group, MA and FFS, and by age. In Tables 3.1, 3.2, and 3.3, enrollment group is compared by age distribution.

Table 3.1: Distribution of Diabetic Enrollees by CMS' Age Categories

Age Category	Frequency	Percent	Cum. Percent
18-24	30	0.03	0.03
25-34	270	0.28	0.31
35-44	1,207	1.26	1.57
45-54	4,256	4.43	6.00
55-64	9,894	10.29	16.29
65-69	22,077	22.97	39.26
70-74	21,969	22.85	62.11
75-79	17,227	17.92	80.03
80-84	11,694	12.17	92.20
85 or older	7,501	7.80	100.00
Total	96,125	100.00	

Table 3.2: Distribution of Diabetic Enrollees by CMS' Age Categories and Type of Insurance

Age Categories	MA	FFS	Total
18-24	12	18	30
	40.00	60.00	100.00
	0.02	0.04	0.03
25-34	98	172	270
	36.30	63.70	100.00
	0.19	0.39	0.28
35-44	484	723	1,207
	40.10	59.90	100.00
	0.93	1.64	1.26

45-54	1,865	2,391	4,256
	43.82	56.18	100.00
	3.58	5.43	4.43
55-64	4,913	4,981	9,894
	49.66	50.34	100.00
	9.44	11.31	10.29
65-69	12,159	9,918	22,077
	55.08	44.92	100.00
	23.35	22.51	22.97
70-74	12,385	9,584	21,969
	56.37	43.63	100.00
	23.79	21.75	22.85
75-79	9,870	7,357	17,227
	57.29	42.71	100.00
	18.96	16.70	17.92
80-84	6,361	5,333	11,694
	54.40	45.60	100.00
	12.22	12.10	12.17
85 or older	3,920	3,581	7,501
	52.26	47.74	100.00
	7.53	8.13	7.80
Total	52,067	44,058	96,125
	54.17	45.83	100.00
	100.00	100.00	100.00

**P-value= <0.001Note:*
First line is frequencies; second line is row percentages; third line is column percentages.

For this project, age groups are collapsed into three categories as shown in Table 3.3 below, under age 65, age 65-74, and 75 years and older. Please note that in the dataset, there are 2601 missing values for age (2.6%) due to beneficiaries who did not indicate their age group.

Table 3.3: Distribution of Diabetic Enrollees by Age Category and Type of Insurance

Age 3 Categories	MA	FFS	Total
18-64	7,372	8,285	15,657
	47.08	52.92	100.00
	14.16	18.80	16.29
65-74	24,544	19,502	44,046

	55.72	44.28	100.00
	47.14	44.26	45.82
75 and older	20,151	16,271	36,422
	55.33	44.67	100.00
	38.70	36.93	37.89
Total	52,067	44,058	96,125
	54.17	45.83	100.00
	100.00	100.00	100.00

**P-value= <0.001*

The overall chi-square value tests whether age group and insurance type (MA vs. FFS) are independent (Table 3.3). The p-value (<0.001) is significant due to a lower proportion of individuals less than 65 years of age in MA than FFS (47.08% vs 52.92%) and a higher proportion of those that are older (65 and above) in MA than FFS. This means that enrollment in either MA or FFS is associated with age. In our dataset, we have 2601 missing values for age (2.6%) due to beneficiaries who did not indicate their age group. It is important to note that the when looking at the distribution of missing values, both MA and FFS have about the same percentage of missing values for the age groups.

18-64 Years Old

Table 3.3 (Age Groups vs. MA_FFS) shows that people who are in the age group 18-64 are more likely to be enrolled in an FFS insurance plan (18.8% vs. 14.2% in MA). The rationale for looking at beneficiaries in this age group is important. Beneficiaries in this age group are generally ones that have qualified for Medicare due to disability and many are dually eligible for Medicare and Medicaid due to low incomes. In fact, in this diabetic sample, out of the people who are younger than 65 (n=15,228), 97.26% are disabled and 46.18% are duals.

65-74 Years Old

Table 3.3 (Age Groups vs. MA_FFS) shows that people who are in the age group 65-74 are more likely to be enrolled in an MA insurance plan (47.1% vs. 44.28% in FFS).

75 Years and Older

Table3. 3 (Age Groups vs. MA_FFS) also shows that people who are in the age group 75 and older are more likely to be enrolled in an MA insurance plan (38.7% vs. 36.1% in FFS). Previous studies have found that elderly Medicare adults (those 65 and above) do not value having a large number of choices as highly as do younger adults and that elderly beneficiaries' knowledge of their alternative insurance options or benefits in MA is poor [McWilliams et al, 2013]. Older adults may in fact appreciate the coordination of care offered by MA and have less concern about the restrictions in provider choice associated with MA plans. This may explain why they prefer enrollment in MA over FFS. Based on a two-sample proportion test, we can conclude that the proportion of individuals 75 and older is higher in MA subscribers (55.3% versus FFS subscribers); 44.7% p-value= <0.0001.

3.2 Gender

Table 3.4 shows the frequency of males and females in the sample. There is a higher proportion of females (55.8%) than males (44.2%) who have diabetes.

Table 3.4: Distribution of Diabetic Enrollees by Gender

Gender	Frequency	Percent	Cum. Percent
Female	55,073	55.78	55.78
Male	43,653	44.22	100.00
Total	98,726	100.00	

**P-value= <0.001*

Table 3.5 shows the proportion of males and females enrolling in MA and FFS in the sample.

Table 3.5: Frequency of Males and Females by Insurance Type

Gender	MA	FFS	Total
Female	30,070	25,003	55,073
	54.60	45.40	100.00
	55.91	55.64	55.78
Male	23,715	19,938	43,653
	54.33	45.67	100.00
	44.09	44.36	44.22
Total	53,785	44,941	98,726
	54.48	45.52	100.00
	100.00	100.00	100.00

**P-value= 0.39*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

When looking at the overall chi-square test of whether the distributions of gender and insurance type (MA vs. FFS) are independent, we can see that there is not a statistically significant difference in the distribution of gender by insurance types (p= 0.39).
In this sample, those enrolled in MA are 44.1% male and 55.9% female. Similarly, of those enrolled in FFS, 44.4% are male and 55.6% are female. The analysis above indicates that both males and females in the sample are equally likely to enroll in either MA or FFS (p-value .390).

3.3 Race

Table 3.6 shows the distribution of racial category within the diabetic sample utilized in this project. Table 3.6 shows that the majority of enrollees are Whites (75.9%). Blacks, Asians, Hispanics, and Native Americans constitute a minority with 15.2%, 2.05%, 3.78%, and .43% respectively.

Table 3.6: Distribution of Diabetic Enrollees by Racial Category

Race Categories	Frequency	Percent	Cum. Percent
Unknown	110	0.11	0.11
White	74,933	75.90	76.01
Black	15,078	15.27	91.28
Other	2,425	2.46	93.74
Asian	2,024	2.05	95.79
Hispanic	3,728	3.78	99.57
North American Native	428	0.43	100.00
Total	98,726	100.00	

Table 3.7 shows the distribution of diabetic patients' enrollment by racial group between MA and FFS.

Table 3.7: Distribution of Enrollees by Racial Category and Insurance Type

Race	MA	FFS	Total
Unknown	47	63	110
	42.73	57.27	100.00
	0.09	0.14	0.11
White	39,260	35,673	74,933
	52.39	47.61	100.00
	72.99	79.38	75.90
Black	9,259	5,819	15,078
	61.41	38.59	100.00
	17.21	12.95	15.27
Other	1,327	1,098	2,425
	54.72	45.28	100.00
	2.47	2.44	2.46
Asian	1,221	803	2,024
	60.33	39.67	100.00
	2.27	1.79	2.05
Hispanic	2,503	1,225	3,728
	67.14	32.86	100.00
	4.65	2.73	3.78
North American Native	168	260	428
	39.25	60.75	100.00
	0.31	0.58	0.43

Total	53,785	44,941	98,726
	54.48	45.52	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

The chi-square test is statistically significant and the distribution of beneficiary enrollment in MA and FFS varies by race varies ($p < 0.0001$). This may indicate that there are aspects of MA as compared to FFS that are more attractive to specific racial groups. However, it is important to recognize that the MA option is not available in all geographic areas of the U.S. while FFS is available nationally.

Table 3.7 shows that FFS has a higher proportion of Whites (79.4%) versus 72.9% in MA; and 0.58% Native Americans in FFS versus 0.31% in MA. Consistent with previous research, the table shows minority groups including Blacks, Asians, and Hispanics have a preference for enrolling in MA over FFS. One reason may be that the lower out-of-pocket costs for managed care (compared to those in FFS) may be attractive among minorities who tend to have lower incomes. For example, Balsa et al. 2007, found that Hispanics in managed care were less likely to delay care for cost reasons, relative to Whites, than Hispanics in FFS.

To further explore enrollment of the racial groups in MA and FFS, Native Americans and unknown races were excluded from the sample and the remaining enrollees were dichotomized into two groups. The reason for excluding both Native Americans and Unknowns from the sample is because each group constitutes less than .05% of the sample. These numbers are so small that including or excluding them does not provide any meaningful contributions in the analysis. The first group was defined as all Whites

=1 and the second group contained all non-Whites =0 (excluding Native Americans and unknowns).

Table 3.8 Distribution of Enrollees by Insurance Type and Race: Whites vs. non-Whites Excluding Native Americans and Unknown Race

	MA	FFS	Total
Non White	14,310	8,945	23,255
	61.54	38.46	100.00
	26.71	20.05	23.68
White	39,260	35,673	74,933
	52.39	47.61	100.00
	73.29	79.95	76.32
Total	53,570	44,618	98,188
	54.56	45.44	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

After excluding Native Americans and unknowns, Table 3.8 shows a greater preference among non-Whites as to enroll in MA (62%) versus Whites (52%).

3.4 Education

Table 3.9 shows the overall frequency distribution by CMS level of education.

Table 3.9: Distribution of Diabetic Enrollees by Educational Level

Education Categories	Frequency	Percent	Cum. Percent
8th grade or less	13,810	14.80	14.80
Some high school, did not graduate	14,965	16.03	30.83
High school graduate or GED	31,565	33.82	64.65
Some college or 2year degree	20,102	21.54	86.18
4-year graduate	6,006	6.43	92.62
More than 4-year college degree	6,889	7.38	100.00
Total	93,337	100.00	

For purposes of this analysis, the CMS' six groupings of education shown above will be condensed into four categories: high school education or less, some college education,

four year degree, and more than four years of college. In our dataset, we have 5389 missing values for education group (5.45%) from enrollees that did not indicate their level of education. A closer inspection of these missing values by insurance type revealed that that 3,123 (57.95%) of the missing values are from MA enrollees and 2,226 (42.05) are FFS enrollees.

Table 3.10: Distribution of Educational Level by Insurance Type

Education Categories	MA	FFS	Total
High school or less	33,764	26,576	60,340
	55.96	44.04	100.00
	66.65	62.28	64.65
Some College	10,724	9,378	20,102
	53.35	46.65	100.00
	21.17	21.98	21.54
4 Year Degree	3,029	2,977	6,006
	50.43	49.57	100.00
	5.98	6.98	6.43
More than 4 year	3,145	3,744	6,889
	45.65	54.35	100.00
	6.21	8.77	7.38
Total	50,662	42,675	93,337
	54.28	45.72	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Table 3.10 shows the educational groups by insurance type. It can be seen that MA has a higher proportion of enrollees with a high school education or less (66.7% in MA versus 62.3% in FFS). This may reflect the larger numbers of minorities in MA than FFS. Disparities in socioeconomic status were marked for both black and Hispanic populations, particularly among rural residents. For example, more than half of rural blacks and Hispanics reported less than a high school education and are more likely to live below the federal poverty level than were their urban counterpart [J.C Probst, et al,

2011), Since education is positively correlated with income and minorities have been shown , on average, to have lower average levels of education and income than Whites, the lower out-of-pocket costs in managed care as compared to FFS may be very attractive to those with lower incomes. FFS and MA have similar proportions of enrollees with some college education (21.98% in FFS vs. 21.17% in MA); FFS has a slightly higher proportion of enrollees with a four- year degree (6.98% in FFS vs. 5.98% in MA); and a higher proportion of enrollees with more than a four- year degree (8.77% in FFS vs. 6.21% in MA). In summary, enrollees with higher levels of education are significantly more likely to enroll in FFS than MA ($P < 0.0001$).

3.5 Region and Urban versus Rural Residence:

CMS classifies Medicare beneficiary places of residence in the U.S. into one of ten regions:

Region 1: Northeast (CT, ME, MA, NH, RI, VT)
Region 2: North Mid-Atlantic (NJ, NY, PR, and VI)
Region 3: Mid-Atlantic (DE, DC, MD, PA, VA, and WV)
Region 4: South Atlantic (AL, FL, GA, KY, MS, NC, SC, and TN)
Region 5: East Midwest (IL, IN, MI, MN, OH, and WI)
Region 6: Southwest (AR, LA, NM, OK, TX)
Region 7: Midwest (IA, KS, MO, and NE)
Region 8: Mountain (CO, MT, ND, SD, UT, and WY)
Region 9: Pacific (AZ, CA, HI, and NV)
Region 10: Northwest (AK, ID, OR, WA)

Table 3.11 shows the distribution of region (numbered from 1 to 10) by insurance type. Overall, there is a significant differences in the distribution of region between MA and FFS (p=0.000).

Table 3.11: Distribution of Diabetic Enrollees by CMS' Regional Classification and Insurance Type.

Region	MA	FFS	Total
1	2,457	2,152	4,609

	53.31	46.69	100.00
	4.57	4.79	4.67
2	8,237	5,713	13,950
	59.05	40.95	100.00
	15.31	12.71	14.13
3	4,663	4,742	9,405
	49.58	50.42	100.00
	8.67	10.55	9.53
4	9,486	9,690	19,176
	49.47	50.53	100.00
	17.64	21.56	19.42
5	8,448	7,520	15,968
	52.91	47.09	100.00
	15.71	16.73	16.17
6	5,137	4,853	9,990
	51.42	48.58	100.00
	9.55	10.80	10.12
7	1,491	2,397	3,888
	38.35	61.65	100.00
	2.77	5.33	3.94
8	1,640	1,738	3,378
	48.55	51.45	100.00
	3.05	3.87	3.42
9	9,162	4,386	13,548
	67.63	32.37	100.00
	17.03	9.76	13.72
10	3,064	1,750	4,814
	63.65	36.35	100.00
	5.70	3.89	4.88
Total	53,785	44,941	98,726
	54.48	45.52	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

A goal of this project is to classify respondents not only by the CMS' region of residences outlined above, but also by urban versus rural residence as defined by the United States Census Bureau. Since the data set contains zip code for each respondent, each zip code was linked to the Census Bureau's zip code classification as primarily a rural or urban area. The Census Bureau rural/urban classification of zip is available for

purchase from GREATDATA.COM. The US Census Bureau defines urban as an area with a population density exceeding 1,000 people per square mile. Rural is defined as an area with a population density less than 1,000 people per square mile. GREATDATA.COM uses these definitions and further subdivides urban into suburban (1,000 – 3,000 persons per square mile), and urban (3,000 plus persons per square mile). The dataset also provides a population estimate for each zip code.

Table 3.12 below shows the distribution of rural/suburban/urban classification by insurance type. There are missing values for 160 people with unmatched zip codes in the sample for which there were no matches in the GREATDATA database.

Table 3.12: Distribution of Rural/Urban Residence by Insurance Type

Residential Classification	MA	FFS	Total
Rural	15,512	19,673	35,185
	44.09	55.91	100.00
	28.91	43.81	35.70
Suburban	15,798	13,291	29,089
	54.31	45.69	100.00
	29.44	29.59	29.51
Urban	22,346	11,946	34,292
	65.16	34.84	100.00
	41.65	26.60	34.79
Total	53,656	44,910	98,566
	54.44	45.56	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

The distribution of enrollees by region and insurance type (MA vs. FFS) shows enrollees in FFS are more likely to reside in rural areas (43.8%) as compared to MA (28.9%). Previous research has shown that MA plans have lower penetration in many rural areas

due to low population density, small numbers of providers, and rural provider resistance to MA contracting [Gold M, 2009]. This may be one explanation for why there are lower levels of Medicare enrollment for MA plans in rural areas as compared to FFS. The table shows that MA enrollees to be more likely to reside in urban areas (S+U = 71.1%) compared to FFS enrollees (S+U = 56.2%).

3.6 Disability

To qualify for Federal disability and for Social Security Disability Insurance (SSDI), a person must be unable to engage in "substantial gainful activity" because of a medically determined physical or mental impairment expected to last at least 12 months or until death. Some qualified due to chronic diseases often associated with aging, such as musculoskeletal system disease and circulatory problems, others qualified because of cancer and injuries. Individuals meeting disability criteria and are Medicare eligible will receive Medicare benefits after a two year waiting period [SSA.gov]. In this sample of diabetic beneficiaries, about 18% (17,723) reported being disabled and about 15% (14,624) indicated they received proxy help (had another person assist them) to complete the survey. The analysis below explores differences in these and other patient characteristic among diabetic beneficiaries.

Table 3.13 shows the proportion of beneficiaries in MA and FFS that are disabled. A total of 17, 723 beneficiaries were flagged by CMS as being disabled in this sample. A higher proportion of enrollees with disability (51.5 %) are FFS as compared to 48.5 % in MA. It appears that enrollees with disability may prefer to enroll in FFS over MA.

It should be noted that of the 17,723 disabled beneficiaries in the sample, 15,228 (86%) are younger than 65, 2096 (12%) are in the age group 65-74, 30 (.001%) are 75 and older,

and there are 369 (2%) disabled who did not indicate their age. Research shows that the disabled in MA and FFS share some aspects of experience of care [Beatty et al, 2001]. Previous studies have shown that disabled Medicare enrollees differ from other Medicare beneficiaries in several ways. Persons with disability are more likely to have mental and physical impairments, multiple comorbid conditions or more serious health conditions and are more likely to be in Fee-for-Service Medicare [Nicholas, 2009; kff.org]. Also, past research has found that the disabled who are enrolled in MA were more likely to disenroll from MA as compared to those enrolled in MA who were not disabled [Nicholas, 2009]. In addition, disabled Medicare enrollees are more likely to be younger than 65 and to report lower health status as compared to nondisabled Medicare beneficiaries [KFF.org]

Table 3.13: Distribution of Disabled Diabetic Enrollee by Insurance Type

Disabled	MA	FFS	Total
No	45,190	35,813	81,003
	55.79	44.21	100.00
	84.02	79.69	82.05
Yes	8,595	9,128	17,723
	48.50	51.50	100.00
	15.98	20.31	17.95
Total	53,785	44,941	98,726
	54.48	45.52	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

3.7 Dual Eligibility

Dual Eligible beneficiaries are individuals who are entitled to Medicare and are also eligible for some level of assistance from their state Medicaid program. Dual eligible

beneficiaries are among the sickest and poorest individuals covered by either Medicare or Medicaid (kff.org). Dual eligible beneficiaries have low-incomes, which is one of the criteria for qualifying for dual status (CMS.Gov, Medicare-Medicaid Coordination Office- Fact Sheet August 2011). In this diabetic sample of 98,726, 23.4% (n=23,150) are dual eligible. This percentage is slightly higher than the number of duals in the general Medicare population of 20% cited by KFF and seen in the 2009 CAHPS data. The higher level of disability among beneficiaries with diabetes is likely related to the disabling effects of diabetes, particularly when not treated. Diabetes can lead to blindness, amputation, and death. Tables 3.14A and 3.14 B show the distributions of patients in MA and FFS that are dually eligible for both Medicare and Medicaid, by age. In this diabetic sample of 98,726, 23.4% (n=23,150) are duals. Table 3.14A shows the duals in the 65 and older group of Medicare enrollees. We see from this table that 18% or 15,077 of Medicare enrollees age 65 and older (n=80,468) are duals. When looking at this group of duals within the 65 and over age group, we can see that the majority, 56.8% (n= 8,566) are enrolled in MA and 43.2% (n=6,511) are in FFS. Research has shown that older Americans are less familiar and less apt to use information to navigate coverage options {692 Greenwald, L.M. 2006; 420 Uhrig, J.D. 2006}. They are more likely to rely on managed care for care coordination. Perhaps this supports why older duals are more likely to enroll in MA than FFS.

Table 3.14B shows the number of duals in Medicare enrollees under age 65. From Table 3.14B, we see that 46.18% or 7,230 of Medicare enrollees below the age of 65 (n= 15,657) are duals. We can see that the majority of duals below the age of 65 are enrolled in FFS (55.6% n= 8,566) compared to MA (44.4% n=6,511).

Table 3.14A: Distribution of Dual Status for Diabetic Enrollees 65 Years and Older by Insurance Type

Dual Status	MA	FFS	Total
No	36,129	29,262	65,391
	55.25	44.75	100.00
	80.83	81.80	81.26
Yes	8,566	6,511	15,077
	56.82	43.18	100.00
	19.17	18.20	18.74
Total	44,695	35,773	80,468
	55.54	44.46	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Table 3.14B: Distribution of Dual Status for Enrollees Under Age 65 years by Insurance Type

Dual Status	MA	FFS	Total
No	4,160	4,267	8,427
	49.37	50.63	100.00
	56.43	51.50	53.82
Yes	3,212	4,018	7,230
	44.43	55.57	100.00
	43.57	48.50	46.18
Total	7,372	8,285	15,657
	47.08	52.92	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

3.8 Proxy Response

Table 3.15 shows the distribution of beneficiaries in MA and FFS who indicated "yes" to receiving help completing the survey. A total of 14, 624 (14.8 %) beneficiaries reported that they received help completing the survey, 57,124 (57.9%) answered "No" to receiving proxy help, and 26,978 (27.3%) did not answer this question (missing). From Table 3.15, we can see that the proportion of enrollees needing proxy assistance is slightly higher in MA (53.4%) versus (46.6 %) in FFS and statistically significant.

Research previously cited and Table 3.10 show that enrollees with lower levels of education were more likely to enroll in MA than FFS. It might be expected that this would be a factor contributing to higher numbers of enrollees needing proxy assistance in MA than FFS. There are 26, 978 missing values from enrollees who did not indicate whether they received proxy help. Further analysis revealed that a majority 54.9% of these beneficiaries are enrolled in MA compared to 45.1% in FFS.

Table 3.15: Distribution of Enrollees' Reporting of Use of Proxy Assistance by Insurance Type

Proxy Assistance in Survey	MA	FFS	Total
Yes	7,809	6,815	14,624
	53.40	46.60	100.00
	20.03	20.80	20.38
No	31,179	25,945	57,124
	54.58	45.42	100.00
	79.97	79.20	79.62
Total	38,988	32,760	71,748
	54.34	45.66	100.00
	100.00	100.00	100.00

**P-value= 0.01*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Analysis of Hypothesis 1.2 - A higher proportion of MA enrollees as compared to FFS with diabetes will report that their personal doctor explains things in a way that was easy to understand; It was easy to get the care, tests or treatment you thought you needed; It was easy to get a prescription filled through Medicare; and a higher proportion of FFS enrollees will report more ease with getting an appointment to see a specialist as compared to MA enrollees;

To assess experience of care for the diabetic population enrolling in MA and FFS, this research examines responses to four questions in the 2009 Consumer Assessment of Healthcare Providers and Systems survey. These questions are:

"In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?"
"In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through your plan?"
"In the last 6 months, how often was it easy to get appointments with specialists?"
"In the last 6 months, how often was it easy to use Medicare to get the medicines your doctor prescribed?"

Only persons who reported having used each of the four services in the previous six months were asked each experience of care question. The four response categories to each question were: Always, Usually, Sometimes, and Never. Differences in responses to the experience of care questions are examined (Hypothesis 1.2) between beneficiaries enrolled in MA and FFS plans.

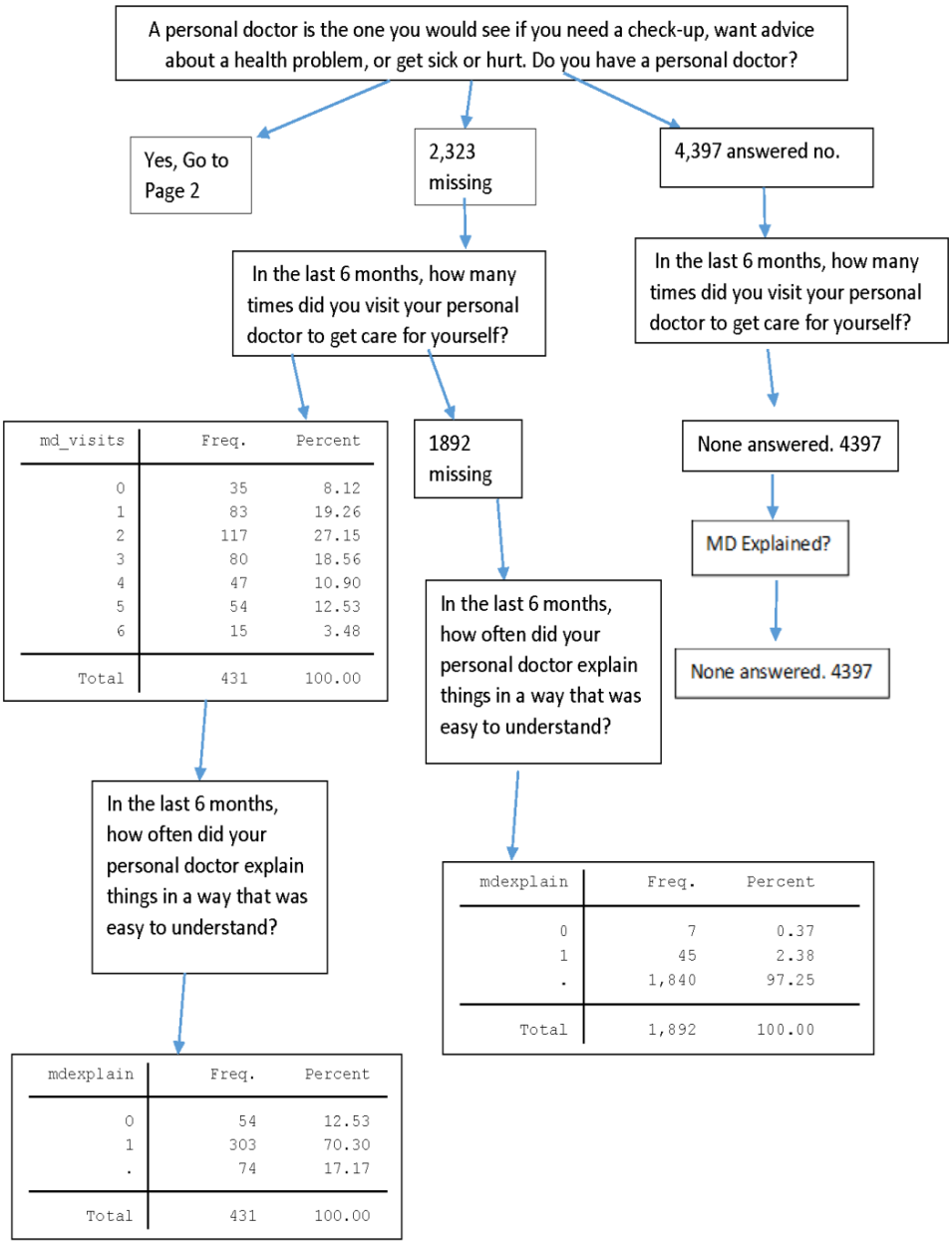
Outcome Question 1(Doctor's Explanation): In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?

The outcome question "In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?" is preceded by two screener questions about having a personal physician and having seen a physician within the previous six months. The first screener question asks "A personal doctor is the one you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor? Figure 2 shows that 2,323 persons did not respond to this screener question, 4,397 answered "no", and 92,006 (Figure 3) answered "yes" to having

a personal doctor. Figure 3 shows that 81,430 reported they had one or more visits to their personal doctor in the previous six months by responding to the second screener question, "In the last 6 months, how many times did you visit your personal doctor to get care for yourself?"

A total of 82,060 answered the outcome question "In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?" Respondents to the outcome question included persons who had responded negatively or not at all to the screening questions. The following analysis of responses to the outcome question includes all 82,060 enrollees who responded to the question. The16, 666 enrollees who did not answer the outcome question include persons who were screened out due to not having a personal doctor or not having seen the doctor in the previous six months or having decided to skip this outcome question. Further analysis revealed that 9,669 of those who did not answer the outcome question were MA enrollees and the remaining 6,997 were FFS enrollees.

Figure 2: Response Pattern to Question about Having a Personal Doctor (N=98,726)



md_visits	Freq.	Percent
0	35	8.12
1	83	19.26
2	117	27.15
3	80	18.56
4	47	10.90
5	54	12.53
6	15	3.48
Total	431	100.00

mdexplain	Freq.	Percent
0	7	0.37
1	45	2.38
.	1,840	97.25
Total	1,892	100.00

mdexplain	Freq.	Percent
0	54	12.53
1	303	70.30
.	74	17.17
Total	431	100.00

Figure 3: Response Pattern for Persons who Answered "Yes" to Having a Personal Doctor (N=92,006)

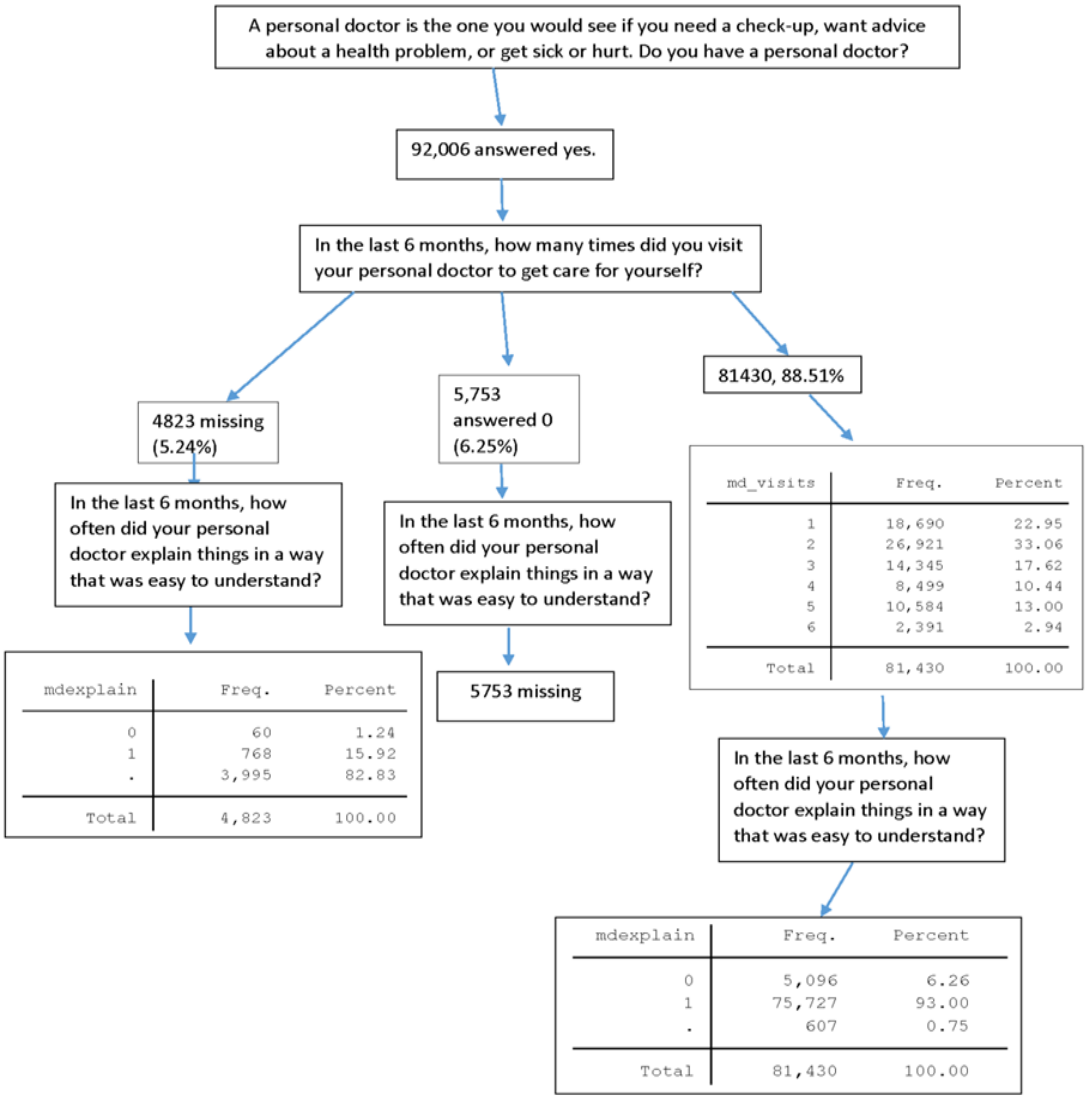


Table 3.16 shows the distribution of responses to the question about doctors' explanations.

Table 3.16: Distribution of Diabetic Enrollee's Responses to Doctors Explanation by Insurance Type

Ease of Understanding Doctor's'Explanation	MA	FFS	Total
Never	491	333	824
	59.59	40.41	100.00
	1.11	0.88	1.00
Sometimes	2,486	1,907	4,393
	56.59	43.41	100.00
	5.64	5.03	5.35
Usually	8,410	7,962	16,372
	51.37	48.63	100.00
	19.06	20.98	19.95
Always	32,729	27,742	60,471
	54.12	45.88	100.00
	74.19	73.11	73.69
Total	44,116	37,944	82,060
	53.76	46.24	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

In the analysis the four response categories are combined into two categories: "never" and "sometimes" are compared to "usually" and "always" responses.

Table 3.17: Binary Distribution of Enrollees' Responses for Doctor's Explanation by Insurance Type

Ease of Understanding Doctors'Explanation	MA	FFS	Total
Never or sometimes	2,977	2,240	5,217
	57.06	42.94	100.00
	6.75	5.90	6.36
Usually and always	41,139	35,704	76,843
	53.54	46.46	100.00
	93.25	94.10	93.64
Total	44,116	37,944	82,060
	53.76	46.24	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Table 3.17 shows the chi-square test of whether the distributions of doctor's explanation (dichotomized) and insurance type (MA vs. FFS) are independent. We can see that enrollees in FFS are more likely to answer that their doctors "always" or "usually" explain things in a way that was easy to understand (94.10%) versus 93.25% in MA. Although this difference is statistically significant, the difference is small and unlikely to have programmatic importance.

Outcome Question 2: In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through your plan?

There is one screener questions that precedes the outcome question "In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through your plan?" The screener question asks "In the last 6 months, did you try to get any kind of care, tests, or treatment through your plan?" Figure 4 shows that 5683 persons are "missing" answers to the screener question, 36,757 answered "no", and 56,286 answered "yes" to the screener question. Relatively few of those who answered "no" or were missing answers went on to answer the outcome question.

Out of the 98,726 enrollees in the sample, 56,092 (56,286-1033+116+723=56,286) answered the outcome question by indicating having received care through Medicare in the previous six months. Thus, 42,635 enrollees did not answer this question; possibly this was because they did not seek any kind of treatment within the specified time, or because they just decided to skip the question. Further analysis revealed that 24,154 of those that did not answer this question were MA enrollees and the remaining 18,480 were FFS enrollees.

Figure 4: Response Pattern to Persons Question about Receiving Care, Tests, or Treatments in the Previous Six Months (N=98,726)

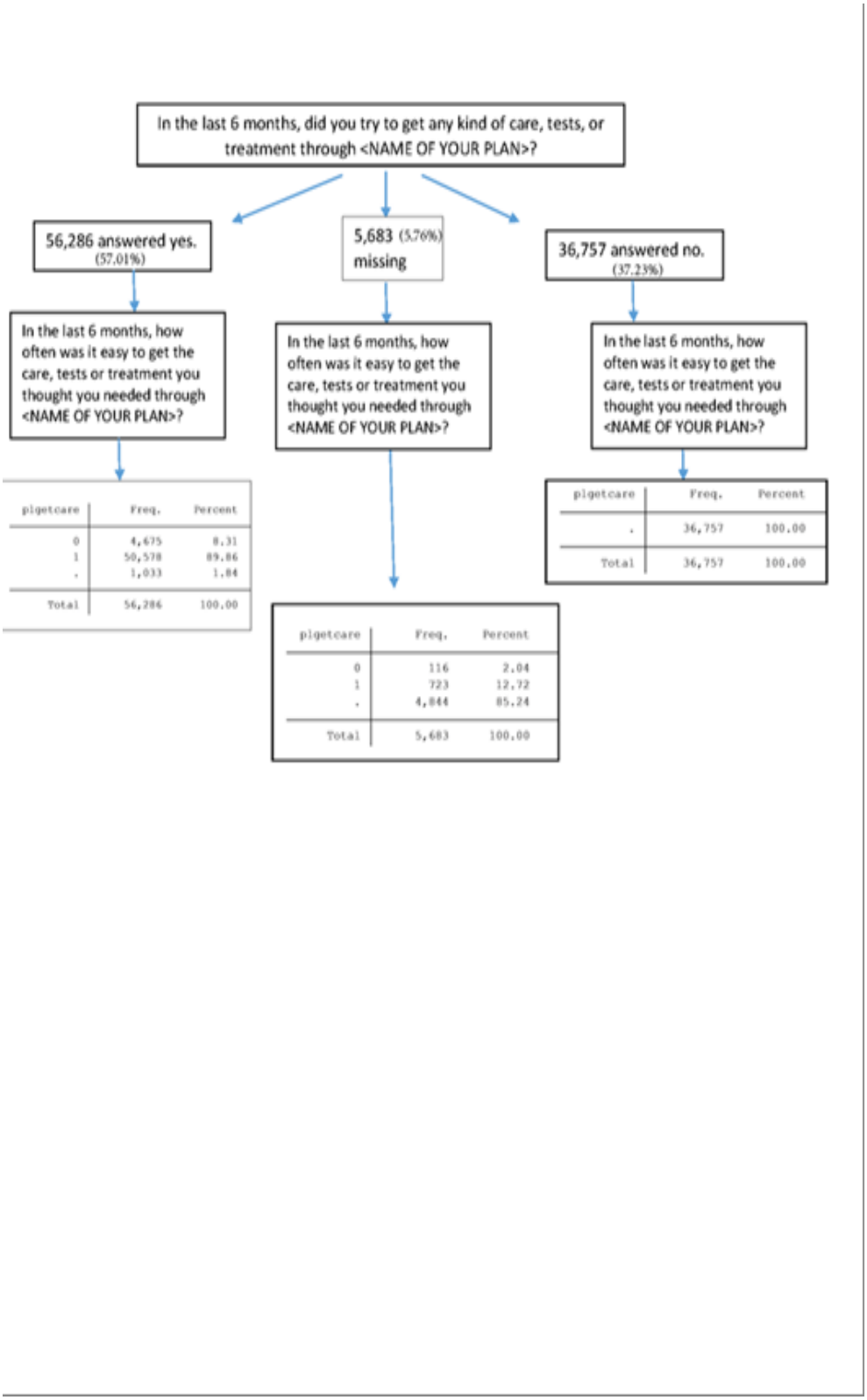


Table 3.18: Distribution of Diabetic Enrollees' Responses to the Question of Obtaining Care, Tests, or Treatment by Insurance Type

Ease of Obtaining Care, Tests, or Treatment	MA	FFS	Total
Never	747	470	1,217
	61.38	38.62	100.00
	2.52	1.78	2.17
Sometimes	2,178	1,396	3,574
	60.94	39.06	100.00
	7.35	5.28	6.37
Usually	7,317	6,735	14,052
	52.07	47.93	100.00
	24.69	25.45	25.05
Always	19,389	17,860	37,249
	52.05	47.95	100.00
	65.43	67.50	66.41
Total	29,631	26,461	56,092
	52.83	47.17	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Table 3.19 shows the four answer choices dichotomized by combining "never" and "sometimes" versus "usually" and "always" for the two insurance types.

Table 3.19: Binary Response for Obtaining Care, Tests, or Treatment by Insurance Type

Ease of Obtaining Care, Tests, or Treatment	MA	FFS	Total
Never or sometimes	2,925	1,866	4,791
	61.05	38.95	100.00
	9.87	7.05	8.54
Usually or always	26,706	24,595	51,301
	52.06	47.94	100.00
	90.13	92.95	91.46
Total	29,631	26,461	56,092
	52.83	47.17	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

When looking at the chi-square test of whether the distributions of getting care (dichotomized) and insurance type (MA vs. FFS) are independent, we can see that enrollees in FFS are more likely to indicate having received care, tests or treatment in the previous six months if in Medicare FFS (92.95%) than in MA (90.13%). This difference is small and, even though it is statistically significant, suggests limited programmatic importance.

Question 3: In the last 6 months, how often was it easy to get appointments with specialists?

There is on screener that precedes the outcome question, "In the last 6 months, how often was it easy to get appointments with specialists?" The screener question asks "In the last 6 months, did you try to make any appointment to see a specialist?" Figure 5 shows that 4935 persons are missing answers to this screener question, 42,196 answered "no", and 51,595 answered "yes" to the question. Relatively few of those who answered "no" or were "missing" went on to answering the outcome question. Out of the 98,726 enrollees in the sample, 51,515 (5291 + 45,508 +151+565 = 51,515) answered the outcome question by indicating having made an appointment to see a specialist in the previous six months. Thus, 47,212 enrollees did not answer this question; possibly this was because they did not try to make an appointment within the specified time, or because they just decided to skip the question.

Figure 5: Response Pattern to Persons Question About Seeing a Specialist In the Previous Six Months (N=98,726)

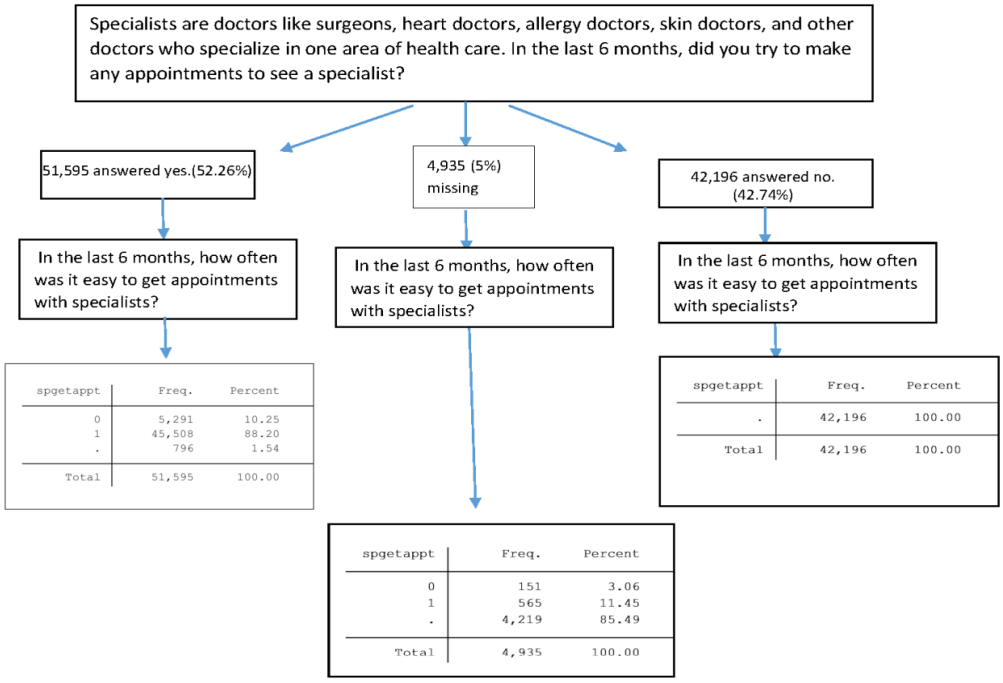


Table 3.20: Distribution of Diabetic Enrollees' Responses to Ease of Getting a Specialist Appointment by Insurance Type.

Ease of Obtaining a Specialist Appointment	MA	FFS	Total
Never	680	487	1,167
	58.27	41.73	100.00
	2.51	1.99	2.27
Sometimes	2,383	1,892	4,275
	55.74	44.26	100.00
	8.81	7.74	8.30
Usually	7,897	7,322	15,219
	51.89	48.11	100.00
	29.18	29.94	29.54
Always	16,102	14,752	30,854
	52.19	47.81	100.00
	59.50	60.33	59.89
Total	27,062	24,453	51,515
	52.53	47.47	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Table 3.21 shows the four answer choices dichotomized as "never" and "sometimes" versus "usually" and "always" for the two insurance types.

Table 3.21: Ease of Obtaining a Specialist Appointment by Insurance Type

Ease of Obtaining a Specialist Appointment	MA	FFS	Total
Never or sometimes	3,063	2,379	5,442
	56.28	43.72	100.00
	11.32	9.73	10.56
Usually or always	23,999	22,074	46,073
	52.09	47.91	100.00
	88.68	90.27	89.44
Total	27,062	24,453	51,515
	52.53	47.47	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Table 3.21 shows that a higher proportion of enrollees in FFS (90.3%) than MA (88.7%) report ease with getting an appointment with a specialist. The difference is statistically significant but small and unlikely to have programmatic importance

Question 4: In the last 6 months, how often was it easy to use your health plan to get the medicines your doctor prescribed?

The question of ease experienced among enrollees in obtaining prescription medicines was only asked of those who reported being enrolled in a Medicare Part D drug plan. Out of the 98,726 enrollees in the sample, 70,342 indicated being enrolled in a Part D drug plan. These are enrollees in MA-PD and FFS-PD plans. Those enrollees in "MA Only" and "FFS Only" are excluded in this measure since they do not have a drug benefit through Medicare. It is likely that enrollees in "MA Only" and "FFS Only" plans have a private drug benefit (e.g., through a medi-gap policy or an MA plan covering medications) but some enrollees may have no drug benefit. Table 3.22 shows the distribution of responses to ease of getting medications.

Table 3.22: Distribution of Diabetic Enrollees'Responses to Ease of Obtaining Medications through Prescribed Part D Drug Plans by Insurance Type

Obtaining Prescription Medications	MA-PD	FFS-PD	Total
Never	1,452	894	2,346
	61.89	38.11	100.00
	3.47	3.14	3.34
Sometimes	2,291	1,740	4,031
	56.83	43.17	100.00
	5.47	6.12	5.73

Usually	7,961	6,558	14,519
	54.83	45.17	100.00
	19.00	23.06	20.64
Always	30,197	19,249	49,446
	61.07	38.93	100.00
	72.07	67.68	70.29
Total	41,901	28,441	70,342
	59.57	40.43	100.00
	100.00	100.00	100.00

**P-value= <0.001*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Table 3.23 shows responses the dichotomized outcome, "never" and "sometimes" compared to "usually" and "always" for the two insurance types.

Table 3.23: Distribution of Enrollees' Responses for Ease of Obtaining Prescription Medications by Insurance Type

Ease of Obtaining Prescription Mediciations	MA-PD	FFS-PD	Total
Never or sometimes	3,743	2,634	6,377
	58.70	41.30	100.00
	8.93	9.26	9.07
Usually or always	38,158	25,807	63,965
	59.65	40.35	100.00
	91.07	90.74	90.93
Total	41,901	28,441	70,342
	59.57	40.43	100.00
	100.00	100.00	100.00

**P-value= 0.137*
Note: First line is frequencies; second line is row percentages; third line is column percentages.

Enrollees in MA-PD are not significantly more likely than FFF-PD to indicate ease with using Medicare to get the medicines their doctor prescribed (91.1%) than FFS-PD (90.7%, p=0.137).

Chapter 4. Specific Results Aim 2

Specific Aim 2: Examine the relationship of age, race, gender, proxy status, disability, education, self-reported health status, region of residence, as well as co-morbidities and dual eligibility and how this varies between MA and FFS, among those who have received one or more services and responded to the patient-reported experience questions. Aim two has four hypotheses; each of these hypotheses will be examined below.

Hypothesis 2.1:

After controlling for beneficiary socio-demographics and health characteristics, beneficiaries in both MA and FFS who have a high school education or less will be found to have worse experience of care. In addition, those in MA with a high school education or less will be found to have worse experience of care than those in FFS with a high school education or less.

Analysis of Hypothesis 2.1includes a series of univariate analyses using logistic regressions to examine the relationship between an independent variable and each of the four outcome variables. Co-variates are then added to the regressions to examine the relationship of other socio-demographic health characteristics to the outcome variable. The analyses initially examine these relationships for all MA and FFS enrollees combined and then separately for MA and FFS.

Table 4.1 shows the relationship of education, high school or less as compared to education beyond high school, for each of the four outcome variables. Individuals with more than a high school education are 54.5% ($p<.0001$) more likely to answer "usually

and always" having a better experience with their doctor's explanations than those with a high school or less education. Similarly those with more than a high school education answer more positively for ease of getting care, tests and treatments (7% more, p<.0001); ease of getting specialist appointments (8% more, p<.0001); and ease of getting prescribed medications (20% more, p<.0001), than those with a high school education or less. The odds ratios are statistically significant across the four outcomes but the odds ratios for getting care and for specialty appointments are small and may have little practical significance.

Table 4.1: Unadjusted Odds Ratios for Each Outcome by Education (MA and FFS Combined)

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence Interval	P-value
Education: More than High School (HS) (ref: HS or less)			
Outcome:			
Doctor explanations	1.54	1.45 - 1.65	<0.0001
Obtaining care, tests, or treatment	1.07	1.01 - 1.14	<0.0001
Getting specialist appointment	1.08	1.03 - 1.16	<0.0001
Obtaining prescription drugs	1.20	1.14 - 1.27	<0.0001

Tables 4.2-4.4 depict a series of multivariable analyses to investigate whether experience of care between beneficiaries with a high school education or less and those with more than a high school education differ in MA versus FFS when controlling for demographic and health status variables including education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. Table 4.2 shows the multivariable analysis for MA and FFS enrollees combined, after excluding Native Americans and

those of Unknown ethnicity. The rationale for excluding these two groups was discussed in Aim 1.

Table 4.2 shows those with more than a high school education are 18% more positive with describing the way their personal doctor explain things to them ($p<0.001$) than those with a high school education or less. Those with more than a high school education are 15% less likely to report a positive experience with getting care, tests, or treatment ($p < 0.0001$) and 11% less likely to report a positive experience with ease of getting specialist appointment ($p=0.04$). Those with more than a high school education are 2% less likely to report a negative experience with ease of getting prescription medications than those with a high school education or less, but this is not statistically significant ($p=0.631$).

Table 4.2: Odds Ratios for Each Outcome by Education (MA and FFS Combined) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence Interval	P-value
Education More than High School (HS) (ref: HS or less than High School (HS)			
Outcome			
Doctor explanations	1.18	1.09 1.28	<0.0001
Obtaining care, tests, or treatment	.85	.78 .91	<0.001
Getting specialist appointment	.89	.83 .97	0.04
Obtaining prescription drugs	.98	.91 1.05	0.631

Table 4.3 repeats the analysis of Table 4.2 but only for beneficiaries enrolled in MA. Those with more than a high school education are not statistically different in their assessment of the personal doctor's explanations to them. Those with more than a high

school education are statistically different being 21% more likely to report a negative experience with getting care, tests, or treatment ($p<0.001$). They are 12% more likely to report a statistically significant negative experience with ease of getting specialist appointment ($p=0.029$). Those with more than a high school education do no statistically differ from high school graduates of less in their odds of ease in getting prescription medications.

Table 4.3: Odds Ratios for Each Outcome by Education (MA Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence Interval	P-value
Education More than High School (HS) (ref: HS or less)			
Outcome:			
Doctor explanations	1.11	.99 1.24	0.065
Obtaining care, tests, or treatment	.79	.71 .88	<0.001
Getting specialist appointment	.88	.83 1.02	0.029
Obtaining prescription drugs	1.00	.90 1.11	0.992

Table 4.4 provides analysis for beneficiaries enrolled in FFS only, adjusting for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. Those with more than a high school education are 24% more likely to report positive experiences with the way their personal doctor explains things to them than those with a high school education or less ($p<0.001$). More than a high school education versus those with a high school education is not statistically different from high school or less for experiences with getting care, tests, or treatments ($p=0.074$). Those with more than a high school education are 7% less likely to report a positive experience with ease of getting specialist appointments than those with a high school education or

less (p=0.022). We also see that those with more than a high school education are 3% less likely to report positive experience with ease of getting prescription medications than those with a high school education or less; this was not statistically significant (p= 0.570).

Table 4.4: Odds Ratios for Each Outcome by Education (FFS Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence Interval	P-value
Education More than High School (HS) (ref: HS or less)			
Outcome:			
Doctor explanations	1.24	1.09 1.40	0.001
Obtaining care, tests, or treatment	.89	.78 1.01	0.074
Getting specialist appointment	.93	.78 .98	0.022
Obtaining prescription drugs	.97	.86 1.08	0.570

As a sensitivity analysis, the models presented above were run including Native Americans and those of unknown ethnicity. Comparing the models above (which excluded Native Americans and Unknowns) and the models below (Tables 4.5, 4.6, and 4.7) which included Native Americans and those of Unknown ethnicity revealed substantially the same results. As mentioned in Aim 1, the numbers of Native Americans and Unknown Race are small, each less than .05% and has little effect on the results of the analysis.

Table 4.5: Odds Ratios for Each Outcome by Education (MA and FFS) Adjusted for Demographic and Health Status Covariates

Variable (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence Interval	P-value
Education:			

More than High School (HS) (ref: HS or less)			
Outcome:			
Doctor explanations	1.18	1.09 1.28	<0.0001
Obtaining care, tests, or treatment	.85	1.59 1.89	<0.0001
Getting specialist appointment	.89	.83 .97	0.004
Obtaining prescription drugs	.98	.91 1.06	0.644

Table 4.6: Odds Ratios for Each Outcome by Education (MA Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence Interval	P-value
Education More than High School (HS) (ref: HS or less)			
Outcome:			
Doctor explanations	1.11	.99 1.23	0.067
Obtaining care, tests, or treatment	.79	.72 .88	<0.0001
Getting specialist appointment	.89	.81 .99	0.03
Obtaining prescription drugs	1.00	.90 1.10	0.999

Table 4.7: Odds Ratios for Each Outcome by Education (FFS Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence Interval	P-value
Education More than High School (HS) (ref: HS or less)			
Outcome:			
Doctor explanations	1.25	1.09 1.41	<0.0001
Obtaining care, tests, or treatment	.89	.78 1.01	0.079
Getting specialist appointment	.88	.78 .97	0.02
Obtaining prescription drugs	.97	.86 1.08	0.588

The analysis of Hypothesis 2.1 shows that Medicare beneficiaries who have more than a high school education are more likely to report positive experiences across all four outcomes in the univariable analysis (Table 4.1). The introduction of covariates in the multivariate models modifies the odds ratio for education, an effect associated with the addition of covariates with one or more acting as confounding variables. Confounding occurs when covariates are correlated with both the dependent variable and with the primary independent variable, in this case education. An analysis of potentially confounding variables follows in understanding what their doctor tells them, except in the MA Only analysis (Table 4.3). For the other outcome variables: (1) getting care, tests, or treatment; (2) ease with getting specialist appointment; and (3) ease with getting prescription medications, beneficiaries in both MA and FFS who have more than a high school education report a more positive experience for these outcome variables when no adjustments were made for demographic and health status variables (Table 4.1). When demographic and health status variables are included in the models, we see that those with more than a high school education are likely to report worse experiences with getting care, treatment, or tests and with ease of making appointment with specialist. The two groups do not differ statistically in their reported experience with ease of getting prescription drugs when demographic and health variables are taken into account. This is consistent with previous research (Landon et al. 2004; Elliott et. al 2011) which found that more highly educated beneficiaries tend to report worse experiences with care as they are more critical of their experiences with healthcare than beneficiaries with less education; even though highly educated beneficiaries are likely to have better access to

care than their counterparts in both MA and FFS settings. The table below summarizes findings from Hypothesis 2.1.

4.8: Summary Table for Hypothesis 2.1: Statistically significant coefficients shown with and without adjustments for covariates (race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability

Education: More than high school (ref. high school or less)	MA and FFS Unadjusted for Covariates	MA and FFS adjusted for Covariates	MA only adjusted for Covariates	FFS only adjusted for Covariates
Outcome:				
Doctor explanations	1.55	1.18	1.11 NS	1.24
Obtaining care, tests, or treatment	1.07	.85	.79	.89 NS
Getting specialist appointment	1.09	.89	.88	.93
Obtaining prescription drugs	1.20	.98 NS	1.00 NS	.97 NS

Hypothesis 2.2:

Beneficiaries in FFS and MA with diabetes who are White will be more likely to report a positive experience with care than non-whites after controlling for socio-demographics and health characteristics.

Table 4.9 of hypothesis 2.2 shows univariate analysis looking at the experiences of care between beneficiaries who are White versus non-white. Without controlling for any demographic or health characteristics, the analysis shows that beneficiaries who are White are more likely to report a positive experience for all the outcome variables of this project. We can see that beneficiaries who are White are 69% more likely to answer "usually and always" (better experience) with regards to their experience with their doctor's explanations than non-whites, who mostly answered "never or sometimes" (worse experience). We also see from Table 4.9 that those who are White also answer more positively for ease of getting care , tests and treatments (131% more); ease of

getting specialist appointments (94% more); and ease of getting prescribed medications (100% more).

Table 4.9: Unadjusted Odds Ratios for Each Outcome by Race (MA and FFS Combined)

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Race Whites vs. Non-whites (ref. non-white)			
Outcome:			
Doctor explanations	1.69	1.59 1.79	<0.0001
Obtaining care, tests, or treatment	2.31	2.17 2.47	<0.0001
Getting specialist appointment	1.94	1.82 2.06	<0.0001
Obtaining prescription drugs	2.01	1.91 2.12	<0.0001

Tables 4.10-4.11 depicts multivariable analyses to investigate whether experience of care between Whites and non-whites differ in MA versus FFS when controlling for demographic and health variables including education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. Table 4.10 shows the multivariable analysis for all enrollees (MA and FFS combined) excluding Native Americans and Unknowns. We can see from Table 4.10 that after adjusting for demographic and health variables, Whites are 28% more positive with their experiences of the way their personal doctor explain things to them($p<0.0001$) than non-whites; 72% more positive with their experiences of getting care, tests, or treatment ($p<0.0001$); 51% more positive with their experiences of ease with getting specialist appointment

(p<0.0001); and 76% more positive with their experiences of ease with getting prescription medications (p<0.0001).

Table 4.10: Odds Ratios for Each Outcome by Race (MA and FFS Combined) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Race Whites vs. Non-whites (ref. non-white)			
Outcome:			
Doctor explanations	1.28	1.17 1.39	<0.0001
Obtaining care, tests, or treatment	1.72	1.58 1.88	<0.0001
Getting specialist appointment	1.51	1.391.65	<0.0001
Obtaining prescription drugs	1.76	1.63 1.90	<0.0001

Table 4.11 below shows beneficiaries enrolled in MA only. After excluding Native Americans and Unknowns ethnicity and adjusting for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. We see that Whites in MA only plans are also 31% more likely to report a positive experiences with the way their personal doctor explain things to them (p<0.0001); 73% more likely to report positively with getting care, tests, or treatment (p<0.0001); 51% more positive with their experiences of ease with getting specialist appointment (p<0.0001); and 80% more likely to report a positive experiences with ease of getting prescription medications (p<0.0001) than non-Whites.

Table 4.11: Odds Ratios for Each Outcome by Race (MA Only) Adjusted for Demographic and Health Status Covariates

(Excluding Native	Odds Ratio for Ease	95% Confidence	P-value

American and Unknown respondents)	of Outcome	interval	
Race Whites vs. Non-whites (ref. non-white)			
Outcome:			
Doctor explanations	1.31	1.17 1.46	<0.0001
Obtaining care, tests, or treatment	1.73	1.55 1.94	<0.0001
Getting specialist appointment	1.51	1.36 1.69	<0.0001
Obtaining prescription drugs	1.81	1.63 1.99	<0.0001

Table 4.12 shows analysis for beneficiaries enrolled in FFS only. After excluding Native Americans and those of Unknown ethnicity and controlling for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability; we see that Whites in FFS are still more likely to report positive experience for all the outcome variables. For example, they are: 22% more likely to report a positive experiences with the way their personal doctor explain things to them ($p=0.0005$); 64% more likely to report positively with getting care, tests, or treatment ($p<0.0001$); 49% more positive with their experiences of ease with getting specialist appointment ($p<0.0001$); and 72% more likely to report a positive experiences with ease of getting prescription medications than non-whites ($p<0.0001$).

Table 4.12: Odds Ratios for Each Outcome by Race (FFS Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Race			

Whites vs. Non-whites (ref. non-white)			
Outcome:			
Doctor explanations	1.22	1.06 1.39	0.0005
Obtaining care, tests, or treatment	1.64	1.42 1.89	<0.0001
Getting specialist appointment	1.49	1.31 1.70	<0.0001
Obtaining prescription drugs	1.72	1.52 1.95	<0.0001

As in Hypotheses 2.1 and as a sensitivity analysis, the models presented above were run including Native Americans and those of Unknowns ethnicity. Comparing the models above (which excluded Native Americans and Unknowns) and the models below which included Native Americans and Unknowns revealed similar results. They show that the inclusion of Native Americans and Unknowns leads to substantially similar results and statistically significant with Whites more likely to report positive experiences with all outcome variables.

Table 4.13: Odds Ratios for Each Outcome by Race (MA and FFS) Adjusted for Demographic and Health Status Covariates

Variable (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Race Whites vs .Non-whites (ref. non-white)			
Outcome:			
Doctor explanations	1.26	1.16 1.37	<0.0001
Obtaining care, tests, or treatment	1.73	1.59 1.89	<0.0001
Getting specialist appointment	1.51	1.39 1.64	<0.0001
Obtaining prescription drugs	1.75	1.62 1.89	<0.0001

Table 4.14: Odds Ratios for Each Outcome by Race (MA Only) Adjusted for Demographic and Health Status Covariates

Variable (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Race Whites vs Non-whites (ref. non-white)			
Outcome:			
Doctor explanations	1.29	1.16 1.45	<0.0001
Obtaining care, tests, or treatment	1.75	1.57 1.96	<0.0001
Getting specialist appointment	1.49	1.34 1.67	<0.0001
Obtaining prescription drugs	1.80	1.62 1.99	<0.0001

Table 4.15: Odds Ratios for Each Outcome by Race (FFS Only) Adjusted for Demographic and Health Status Covariates

variables (Including Native American and Unknown respondents)	Odds ratio of Whites to nonwhite	95% Confidence interval	P-value
Race Whites vs. Non-whites (ref. non-white)			
Outcome:			
Doctor explanations	1.19	1.04 1.37	0.01
Obtaining care, tests, or treatment	1.65	1.43 1.90	<0.0001
Getting specialist appointment	1.49	1.31 1.70	<0.0001
Obtaining prescription drugs	1.69	1.50 1.92	<0.0001

Results from analysis of Hypothesis 2.2 indicated that Medicare beneficiaries who are White are more likely to report positive experiences for all the outcome variables in analyses excluding and including demographic and health variables. This is consistent with previous research (Elliott et. al 2011), which found that Hispanics and blacks

reported less positive evaluations in surveys of their experiences of care than Whites. The table below summarizes findings from Hypothesis 2.2.

Table 4.16: Summary Table for Hypothesis 2.2: Statistically significant coefficients shown with and without adjustments for covariates (race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability.

Race: Whites vs. Nonwhites (ref. non-white)	MA and FFS Unadjusted for Covariates	MA and FFS adjusted for Covariates	MA only adjusted for Covariates	FFS only adjusted for Covariates
Outcome:				
Doctor explanations	1.69	1.28	1.31	1.22
Obtaining care, tests, or treatment	2.31	1.72	1.73	1.64
Getting specialist appointment	1.94	1.51	1.51	1.49
Obtaining prescription drugs	2.01	1.76	1.81	1.72

Hypothesis 2.3

Medicare beneficiaries with diabetes who are 65 years and older in MA will more frequently report a negative experience with obtaining care than their counterparts in FFS after controlling for socio-demographics and health characteristics.

Table 4.17 shows univariate analysis of Hypothesis 2.3, which compares experiences of care between those 65 and older and those younger than 65 in both MA and FFS. Without controlling for any demographic of health characteristics, the analysis shows that beneficiaries who are 65 and older (regardless of insurance option) are more likely to report a positive experience for all the four outcome variables. We can see that beneficiaries who are 65 and older are 32% more likely to answer "usually and always"

(better experience) with regards to their experience with their doctor's explanations than those younger than 65 ($p<0.0001$). We also see from Table 4.17 that those 65 and older are 118% more likely to answer positively for ease of getting care, tests and treatments ($p<0.0001$); and 86% more likely to be positive with ease of getting specialist appointments ($p<0.0001$); and 69 % more likely to report positive experience with getting prescribed medications ($p<0.0001$) than those younger than 65.

Table 4.17: Unadjusted Odds Ratios for Each Outcome by Age (MA and FFS Combined)

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Age: 65 and older vs. younger than 65. (ref: less than 65)			
Outcome:			
Doctor explanations	1.32	1.23 1.41	<0.0001
Obtaining care, tests, or treatment	2.18	2.02 2.31	<0.0001
Getting specialist appointment	1.86	1.75 1.99	<0.0001
Obtaining prescription drugs	1.69	1.59 1.80	<0.0001

Tables 4.18-4.20 show the results of the multivariable analyses to compare experience of care between those that are 65 and older and those that are younger than 65 enrolled in either MA or FFS. The analyses adjusts for demographic and health variables including education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. Table 4.18 shows the multivariable analysis for all enrollees (MA and FFS combined); excluding Native Americans and those of Unknown ethnicity. We

can see from Table 4.18 that after adjusting for demographic and health variables, those that are 65 and older are: 18% more likely to report positive experiences for the way their personal doctor explain things to them ($p<0.0001$); 86% more likely to report positive experiences with ease of getting care, tests, or treatment ($p<0.0001$); 61% more likely to report positive experiences ease with getting specialist appointment ($p<0.0001$)); and are 61% more likely to report positive experiences with ease of getting prescription medications ($p<0.0001$)) than those that are younger than 65.

Table 4.18: Odds Ratios for Each Outcome by Age (MA and FFS Combined) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Age: 65 and older vs. younger than 65. (ref: less than 65)			
Outcome:			
Doctor explanations	1.18	1.07 1.29	<0.0001
Obtaining care, tests, or treatment	1.86	1.69 2.03	<0.0001
Getting specialist appointment	1.61	1.48 1.76	<0.0001
Obtaining prescription drugs	1.61	1.48 1.75	<0.0001

Table 4.19 below shows beneficiaries enrolled in MA only. The analysis excludes Native Americans and those of Unknowns ethnicity and adjusts for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. We find that those 65 and older in MA only plans do not statistically differ from those under age 65 in reporting their experience for the way their personal doctor explain things to them (p =

0.065). However, for the dependent variables: getting care, tests, or treatment; ; ease with getting specialist appointment; and ease with getting prescription medications, people that are 65 and older are 66%, 58%, and 49% more likely to report positive experience for each outcome, respectively (p<0.0001).

Table 4.19: Odds Ratios for Each Outcome by Age (MA Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Age: 65 and older vs. younger than 65. (ref: less than 65)			
Outcome:			
Doctor explanations	1.08	.942 1.23	0.278
Obtaining care, tests, or treatment	1.66	1.47 1.88	<0.0001
Getting specialist appointment	1.58	1.40 1.78	<0.0001
Obtaining prescription drugs	1.49	1.33 1.68	<0.0001

Table 4.20 shows beneficiaries enrolled in FFS only. The analysis excludes Native Americans and those of Unknowns ethnicity and adjusts for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. We find those that are 65 and older in FFS are more likely to report a positive experience with the way their personal doctor explain things to them (29%) (p<0.0001); getting care, tests, or treatment (118%) (p<0.0001); ease with getting specialist appointment (67%) (p<0.0001); and ease with getting prescription medications (69%) (p<0.0001) as compared to those younger than 65.

Table 4.20: Odds Ratios for Each Outcome by Age (FFS Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Age: 65 and older vs. younger than 65. (ref: less than 65)			
Outcome:			
Doctor explanations	1.29	1.13 1.48	<0.0001
Obtaining care, tests, or treatment	2.18	1.90 2.49	<0.0001
Getting specialist appointment	1.67	1.47 1.89	<0.0001
Obtaining prescription drugs	1.69	1.50 1.92	<0.0001

As with the other hypothesis and as a sensitivity analysis, the models presented above were run including Native Americans and those of Unknown ethnicity. Comparing the models above (which excluded Native Americans and Unknowns) and the models below which included Native Americans and Unknowns revealed very similar results that are statistically significant.

Table 4.21: Odds Ratios for Each Outcome by Age (MA and FFS) Adjusted for Demographic and Health Status Covariates

Variable (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Age: 65 and older vs. younger than 65. (ref: less than 65)			
Outcome:			
Doctor explanations	1.17	1.07 1.29	<0.0001

Obtaining care, tests, or treatment	1.84	1.69 2.02	<0.0001
Getting specialist appointment	1.60	1.47 1.75	<0.0001
Obtaining prescription drugs	1.59	1.47 1.74	<0.0001

Table 4.22: Odds Ratios for Each Outcome by Education (MA Only) Adjusted for Demographic and Health Status Covariates

Variables (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Age: 65 and older vs. younger than 65. (ref: less than 65)			
Outcome:			
Doctor explanations	1.08	.95 1.24	0.246
Obtaining care, tests, or treatment	1.66	1.48 1.88	<0.0001
Getting specialist appointment	1.57	1.39 1.77	<0.0001
Obtaining prescription drugs	1.49	1.33 1.67	<0.0001

Table 4.23: Odds Ratios for Each Outcome by Age (FFS Only) Adjusted for Demographic and Health Status Covariates

Variable (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Age: 65 and older vs. younger than 65. (ref: less than 65)			
Outcome:			
Doctor explanations	1.28	1.12 1.46	<0.0001
Obtaining care, tests, or treatment	2.15	1.88 2.46	<0.0001
Getting specialist	1.65	1.46 1.87	<0.0001

appointment			
Obtaining prescription drugs	1.69	1.50 1.92	<0.0001

Results from analysis of Hypothesis 2.3 found that Medicare beneficiaries who are 65 and older in both MA and FFS are likely to report positive experiences of care for all four dependent variables. However, looking at results from Medicare beneficiaries who are 65 and older in MA compared to those 65 and older in FFS, we see that those that are 65 and older in FFS report slightly more positive experience than those in MA. For example, for ease with understanding what their doctor explain, those 65 and older in FFS report 29% more positive experience ($p<0.0001$) as compared to those 65 and older in MA ($p=246$). For ease with getting care, tests, or treatment, those 65 and older in FFS are 52% more likely to report positive experiences than their counterparts in MA ($p<0.0001$). For ease with getting specialist appointment, those 65 and older in FFS are 9% more likely to report positive experiences than their counterparts in MA. Lastly, those 65 and older in FFS are 20% more likely to report positive experience with ease of getting prescription medications than those 65 and older in MA. The table below summarizes findings from Hypothesis 2.3.

Table 4.24: Summary Table for Hypothesis 2.3: Statistically significant coefficients shown with and without adjustments for covariates (race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability

Age: 65 and older vs. younger than 65. (ref: less than 65)	MA and FFS Unadjusted for Covariates	MA and FFS adjusted for Covariates	MA only adjusted for Covariates	FFS only adjusted for Covariates
Outcome:				
Doctor explanations	1.32	1.18	1.08 NS	1.29
Obtaining care, tests, or	2.18	1.86	1.66	2.18

treatment				
Getting specialist appointment	1.86	1.61	1.58	1.67
Obtaining prescription drugs	1.69	1.61	1.49	1.69

Hypothesis 2.3a: Analysis looking at experiences of care for 75 and older group and 65-74 as compared to under age 65

As a sub analysis to Hypothesis 2.3, I looked at experiences of care between those that are 75 years and older compared to those that are younger than 75 in both MA and FFS after adjusting for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. The tables below show experience of care for the outcome variables broken down by three age groups: those younger than 65, those between the ages of 65 and 74, and those that are 75 and older. Using the younger group as the referent group, results from the tables below show that in general, those between the ages of 65-74 and those that are 75 and older do not differ in their experiences of care for the way that their doctor explains things to them. For ease with getting care, treatment, or test; ease with getting appointments from specialists; and ease with getting prescription medication; those that are 75 and older are significantly more likely to be positive than those that are younger than 75.

***Sub- Hypothesis 2.3: 3 Age Groups (Sub Analysis – excluding Native Americans and Unknowns)**

Table 4.25: Sub-Hypothesis: Unadjusted Odds Ratios for Each Outcome by Age Group (MA and FFS Combined)

Variable	Age	Odds Ratio	95% Confidence interval	P-value

Age Group: <65 65-74 >=75				
Outcome:				
Doctor explanations	<65	1.0	-	-
	65-74	1.39	1.29 , 1.49	<0.001
	>=75	1.24	1.15, 1.34	<0.001
Obtaining care, tests, or treatment	<65	1.0	-	-
	65-74	1.99	1.85, 2.13	<0.001
	>=75	2.45	2.26, 2.65	<0.001
Getting specialist appointment	<65	1.0	-	-
	65-74	1.76	1.64, 1.89	<0.001
	>=75	2.00	1.856, 2.16	<0.001
Obtaining prescription drugs	<65	1.0	-	-
	65-74	1.65	1.54, 1.76	<0.001
	>=75	1.76	1.65, 1.89	<0.001

Table 4.26: Sub-Hypothesis: Odds Ratios for Each Outcome by Age Group (MA and FFS Combined) Adjusted for Demographic and Health Status Covariates - excluding Native Americans and Unknowns

Variable	Age	Odds Ratio	95% Confidence interval	P-value
Age Group: <65 65-74 >=75				
Outcome:				
Doctor explanations	<65	1.0	-	-
	65-74	0.97	0.77, 1.22	0.790
	>=75	0.92	0.72, 1.18	0.513
Obtaining care, tests, or treatment	<65	1.0	-	-
	65-74	1.40	1.09, 1.78	0.007

	>=75	1.74	1.34, 2.25	
Getting specialist appointment	<65	1.0	-	-
	65-74	1.60	1.25, 2.02	<0.001
	>=75	1.76	1.37, 2.27	<0.001
Obtaining prescription drugs	<65	1.0	-	-
	65-74	1.34	1.07, 1.67	0.01
	>=75	1.52	1.19, 1.92	0.001

Table 4.27: Sub-Hypothesis: Odds Ratios for Each Outcome by Age Group (MA Only) Adjusted for Demographic and Health Status - excluding Native Americans and Unknowns)

Variable	Age	Odds Ratio	95% Confidence interval	P-value
Age Group: <65 65-74 >=75				
Outcome:				
Doctor explanations	<65	1.0	-	-
	65-74	0.91	0.66, 1.25	0.549
	>=75	0.94	0.67, 1.31	0.717
Obtaining care, tests, or treatment	<65	1.0	-	-
	65-74	1.45	1.05, 2.01	0.023
	>=75	1.72	1.22, 2.43	0.002
Getting specialist appointment	<65	1.0	-	-
	65-74	1.56	1.14, 2.14	0.006
	>=75	1.72	1.23, 2.39	0.001
Obtaining prescription drugs	<65	1.0	-	-
	65-74	1.30	0.96, 1.76	0.092
	>=75	1.39	1.01, 1.91	0.046

Table 4.28: Sub-Hypothesis: Odds Ratios for Each Outcome by Age Group (FFS Only) Adjusted for Demographic and Health Status - excluding Native Americans and Unknowns)

Variable	Age	Odds ratio	95% Confidence interval	P-value
Age Group: <65 65-74 >=75				
Outcome:				
Doctor explanations	<65	1.0	-	-
	65-74	1.04	0.73, 1.48	0.832
	>=75	0.87	0.60, 1.27	0.475
Obtaining care, tests, or treatment	<65	1.0	-	-
	65-74	1.34	0.93, 1.95	0.121
	>=75	1.77	1.19, 2.64	0.005
Getting specialist appointment	<65	1.0	-	-
	65-74	1.71	1.17, 2.48	0.005
	>=75	1.91	1.29, 2.83	0.001
Obtaining prescription drugs	<65	1.0	-	-
	65-74	1.36	0.98, 1.88	0.064
Doctor explanations	>=75	1.70	1.201, 2.416	0.003

Hypothesis 2.4:

Beneficiaries who are females will be associated with less positive reports of experience with their overall care in both MA and FFS than males; females in FFS will report more positive experience with care than those in MA after adjusting for socio-demographics and health characteristics.

Table 4.29, Hypothesis 2.4, shows univariate analysis looking at the experiences of care between males and females in both MA and FFS. Without controlling for any demographic characteristics, the analysis shows that beneficiaries who are males are more likely to report a positive experience for all the outcome variables of this project except for ease with getting prescription medication. We can see that beneficiaries who are males are 6% more likely to answer "usually and always" (better experience) with regards to their experience with their doctor's explanations than females. We also see from Table 4.29 that those who are males also answer more positively for ease of getting care , tests and treatments (10% more); and ease of getting specialist appointments (16% more). However, males are 10% less likely to report positive experience with getting prescribed medications than females. The corresponding odds ratios, 95% confidence intervals and p-values are provided below.

Table 4.29: Unadjusted Odds Ratios for Each Outcome by Gender (MA and FFS Combined)

Variable (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Gender: Males vs. Females (ref. females)			
Outcome:			
Doctor explanations	1.06	1.01 1.13	0.032
Obtaining care, tests, or treatment	1.10	1.04 1.17	0.002
Getting specialist appointment	1.16	1.10 1.23	<0.0001
Obtaining prescription drugs	.90	.85 .94	<0.0001

Tables 4.30-4.31 show multivariable analyses to investigate whether experience of care between males and females differ in MA versus FFS when controlling for certain

demographic and health variables including education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. Table 4.30 shows all enrollees together (both MA and FFS combined); however excluding Native Americans and Unknowns. We can see from Table 4.30 that after controlling for demographic variables, males and females are not statistically different for the way their personal doctor explains things to them; getting care, tests, or treatment; and ease with getting specialist appointment. However, males are 16% less likely to report positive experiences with the ease of filling prescription medications than females. The corresponding odds ratios, 95% confidence intervals and p-values are provided below.

Table 4.30: Odds Ratios for Each Outcome by Gender (MA and FFS Combined) Adjusted for Demographic and Health Status Covariates

Variable (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Gender: Males vs. Females (ref. females)			
Outcome:			
Doctor explanations	.99	.92 1.07	0.779
Obtaining care, tests, or treatment	.99	.97 1.13	0.783
Getting specialist appointment	1.05	.97 1.13	0.212
Obtaining prescription drugs	.84	.78 .89	<0.0001

Table 4.31 below shows beneficiaries enrolled in MA only. After excluding Native Americans and Unknowns ethnicity and adjusting for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. We see that males and females in MA only plans do not differ statistically in their reported experience with the way their personal doctor explains things to them; getting care, tests, or

treatment; and ease with getting specialist appointment. However, males in MA plans are 19% less likely to report positively with their experiences of ease with getting prescription medications than females. The corresponding odds ratios, 95% confidence intervals and p-values are provided below.

Table 4.31: Odds Ratios for Each Outcome by Gender (MA Only) Adjusted for Demographic and Health Status Covariates

Variable (Including Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Gender: Males vs. Females (ref. females)			
Outcome:			
Doctor explanations	.98	.94 1.15	0.428
Obtaining care, tests, or treatment	.97	.94 1.14	0.524
Getting specialist appointment	.99	.91 1.10	0.983
Obtaining prescription drugs	| .81	.73 .88	<0.0001

Table 4.32 shows beneficiaries enrolled in FFS only. After excluding Native Americans and those of Unknowns ethnicity and adjusting for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. We see that males and females in FFS do not statistically differ in their reported experience for the way their personal doctor explains things to them; getting care, tests, or treatment; and ease with getting specialist appointment. However, males in FFS are 13% less likely to report positively with their experiences of ease with getting prescription medications than females. The corresponding odds ratios, 95% confidence intervals and p-values are provided below.

Table 4.32: Odds Ratios for Each Outcome by Gender (FFS Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Gender: Males vs. Females (ref. females)			
Outcome:			
Doctor explanations	1.00	.8933424 1.123852	0.973
Obtaining care, tests, or treatment	1.04	.9165299 1.174942	0.559
Getting specialist appointment	1.11	.998961 1.24351	0.052
Obtaining prescription drugs	.87	.7838084 .9752444	0.016

Again, as a sensitivity analysis, the models presented were run including Native Americans and those of unknown ethnicity. Comparing the models above (which excluded Native Americans and Unknowns) and the models below which included Native Americans and those of Unknowns ethnicity revealed substantially the same results. The results show that even when Native Americans and Unknowns are added to the models, the results are very similar: males and females in MA and FFS do not differ statistically in their reported experiences with three of the outcome variables. Males are less likely to report positive experience with the ease with getting prescription medication.

Table 4.33: Odds Ratios for Each Outcome by Gender (MA and FFS) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Gender: Males vs. Females			

(ref. females)			
Outcome:			
Doctor explanations	1.26	.92 1.07	0.798
Obtaining care, tests, or treatment	.99	.91 1.07	0.756
Getting specialist appointment	1.04	.97 1.12	0.251
Obtaining prescription drugs	.84	.78 .90	<0.0001

Table 4.34: Odds Ratios for Each Outcome by Gender (MA Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Gender: Males vs. Females (ref. females)			
Outcome:			
Doctor explanations	.98	.89 1.09	0.731
Obtaining care, tests, or treatment	.96	.870 1.06	0.451
Getting specialist appointment	.99	.90 1.10	0.914
Obtaining prescription drugs	.81	.74 .89	<0.0001

Table 4.35: Odds Ratios for Each Outcome by Gender (FFS Only) Adjusted for Demographic and Health Status Covariates

Variable (Excluding Native American and Unknown respondents)	Odds Ratio for Ease of Outcome	95% Confidence interval	P-value
Gender: Males vs. Females (ref. females)			
Outcome:			
Doctor explanations	1.00	.89 1.12	0.966
Obtaining care, tests, or treatment	1.04	.92 1.18	0.509
Getting specialist appointment	1.11	.99 1.24	0.06
Obtaining prescription drugs	.877	.79 .98	0.018

Results from analysis of Hypothesis 2.4 indicate that Medicare beneficiaries in both MA and FFS, regardless of gender, do not differ statistically in their reported experiences of care for all the dependent variables being looked at in this study with the exception of ease of getting prescription medication, where males regardless of insurance option, are less likely to report a positive experience. The table below summarizes findings from Hypothesis 2.4.

Table 4.36: Summary Table for Hypothesis 2.4: Statistically significant coefficients shown with and without adjustments for covariates (race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability

Gender: Males Vs. Females (ref. females)	MA and FFS Unadjusted for Covariates	MA and FFS adjusted for Covariates	MA only adjusted for Covariates	FFS only adjusted for Covariates
Outcome:				
Doctor explanations	1.06	.99 NS	.98 NS	1.00 NS
Obtaining care, tests, or treatment	1.10	.99 NS	.97 NS	1.04 NS
Getting specialist appointment	1.16	1.05 NS	.99 NS	1.11 NS
Obtaining prescription drugs	.90	.84	| .81	.87

Chapter 5: Specific Results Aim 2 - Confounding

So far in Aim 2 (Univariate and Multivariable Models), the project explored the outcome variables with and without adjusting for demographic and health characteristics. This section explores whether the outcome variables is confounded by any of the demographic and health covariates.

In this section, education is categorized as high school education or less versus more than a high school education. Table 5.1 below shows the relationship of education with the outcome variable "understanding doctor explanations" with and without adjusting for each demographic and health independent variable. Without adjusting for demographic and health variables, enrollees who have more than a high school education are about 55% (OR=1.55, 95% CI: 1.45, 1.65, $p<0.0001$) more likely to report better experiences with ease of understanding what their personal doctor explains to them. When individual demographic and health covariates are included as independent variables the odds ratio for education may change. A substantial change in the estimated odds ratio may suggests confounding by the added variable. A confounding variable is one that is correlated with both the independent variable (education) and the dependent variable (understanding doctor communication), but not in the causal pathway between the two variables, thereby creating an alternative explanation for the source of variation in the dependent variable.

We see from the summary tables of Hypothesis 2.1 (Appendix C), that the relationship between education and the outcomes of understanding the doctor's explanations does not appear to be confounded by the covariates of race, gender, age, general health status, comorbidities, disability or residence. Therefore, when holding all other variables

constant and only looking at the individual effects of each of these variables (one at a time) on education and the outcome doctor explanations, we see that these variables do not substantially change (confound) the relationship between education and the outcome of understanding the doctor's explanations. In other words, even after adjusting for demographic and health covariates, enrollees with more than a high school education are consistently more likely to report better experience than those with a high school education or less.

However, we see that the variables defined as proxy (whether or not they report "yes" to someone helping them complete the survey) and dual status do appear to have confounding effects. The odds ratio in the unadjusted model (1.55) is much higher than the odds ratio of the adjusted model (1.18). This shows that proxy status and dual status are alternative explanations to educational attainment for explaining patient- reported understanding of doctor explanations.

Table 5.1: Adjusted Odds Ratios for the Outcome, Ease of Understanding Doctor's Explanation, by Level of Education (MA and FFS Combined)

Variable: Education	Unadjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS	95% CI	P-value
Unadjusted			
Education More than High School (HS) (Ref: High School (HS) or less	1.55	1.45 1.65	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS		
Race	1.49	1.40 1.59	<0.0001

White (Ref: Nonwhite)			
Race Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.48	1.39 1.58	<0.0001
Gender Male (Ref: Female)	1.54	1.44 1.64	<0.0001
Age (65 and older (ref: less than 65)	1.54	1.43 1.64	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.45	1.35 1.54	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.55	1.45 1.65	<0.0001
Proxy (Ref: No Proxy Help)	1.29	1.19 1.39	<0.0001
Dual status (Ref: Not Dual Status)	1.42	1.33 1.52	<0.0001
Disabled (Ref: Not Disabled)	1.55	1.45 1.65	<0.0001
Rural Category (Ref: Rural Area)	1.57	1.48 1.68	<0.0001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.18	1.09 1.28	<0.0001
Fully Adjusted Model (adjusted for all variables; including unknowns	1.18	1.08 1.28	<0.0001

and Native Americans)			

Table 5.2 below shows the relationship between education and the outcome variable of "obtaining care, tests, or treatment" with and without adjusting for each demographic and health independent variable. Without adjusting for any demographic and health variables, enrollees that have more than a high school education are about 7% (OR=1.07, 95% CI:1.01, 1.14, p<0,001) more likely to report better experiences with ease of getting care, tests, or treatment. We see from Table 5.2 that the relationship between one's education and answering "always" or "usually" for the outcome variable (Obtaining care, tests, or treatment) is not confounded by the covariates of gender, age, comorbidities, and disability. Therefore, when holding all other variables constant and only looking at the individual effects of each of these variables (one at a time) on education and the outcome "obtaining care, tests, or treatment", we see that these variables do not substantially change the relationship between education and the outcome. In other words, even after adjusting for demographic and health covariates, enrollees with more than a high school education are consistently more likely to report better experience than those with a high school education or less.

We see that the variables race, proxy, residence, dual status, and general health status do appear to have confounding effects on this relationship. Again we see that before controlling for any demographic variables, the unadjusted model shows that those with more than a high school education are about 7% more likely to report better experiences with ease of getting care, tests, or treatment. After adjusting, the odds ratio decreases to

0.85 (95% CI: 0.78, 0.92, p<.001). This shows that race, proxy, residence, dual status, and general health status are alternative explanations to educational attainment for explaining patient-reported ease of obtaining care, tests, or treatment, so that when taken into account, those with more than a high school education are actually 15% less likely to report better experiences with ease of getting care, tests, or treatment than those with a high school education or less.

Table 5.2: Adjusted Odds Ratios for Ease of the Outcome, Ease of Obtaining Care, Tests, or Treatment, by Level of Education (MA and FFS Combined)

Variable: Education	Unadjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS	95% CI	P-value
Unadjusted			
Education More than High School (HS) (ref: HS or less than High School (HS) Education only (Unadjusted)	1.07	1.01 1.14	0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS		
Race White (ref: non-white)	1.01	.95 1.08	0.725
Race White (ref: nonwhite) (with exclusions)	1.01	.95 1.08	0.678
Gender Male (ref: female)	1.06	.99 1.13	0.056
Age (65 and older (ref: less than 65)	1.08	1.01 1.15	0.015
General Health Status Category (ghs) (Ref: Excellent)	.99	.93 1.05	0.868

Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.08	1.01 1.15	0.021
Proxy (Ref: No Proxy Help)	.91	.85 .99	0.021
Disabled (Ref: Not Disabled)	1.07	1.00 1.13	0.047
Rural Category (Ref: Rural Area)	1.10	1.03 1.17	0.003
Dual status (Ref: Not Dual Status)	.97	1.01 1.14	0.030
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	.85	.78 .92	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.85	.78 .92	<0.001

Table 5.3 below shows the relationship between education and the outcome variable "getting specialist appointment" with and without adjusting for each demographic and health independent variable. The table shows that without adjusting for any demographic and health variables, enrollees that have more than a high school education are about 9% (OR=1.09, CI: 1.03, 1.16, p=0.004) more likely to report better experiences with ease of getting appointment from specialists. Table 5.3 shows that the relationship between one's education and answering "always" or "usually" (better experience) for the outcome variable (getting specialist appointment) does not appear to be confounded by the covariates of age, comorbidities, and disability. Therefore, when holding all other variables constant and only looking at the individual effects of each of these variables

(one at a time) on education and the outcome "getting specialist appointment", we see that these variables do not substantially change the relationship between education and the outcome. Thus, individuals with more than a high school education are still more likely to report better experience than those with a high school education or less even after adjustment,

We see that the variables of race, gender, proxy, residence, dual status, and general health status do appear to have confounding effects on this relationship. After adjusting, the odds ratio for ease of getting an appointment from a specialist by education decreases to 0.89. This shows that race, gender, proxy, residence, dual status, and general health status are alternative explanations to educational attainment for explaining patient- reported ease of getting specialist appointment, so that when taken into account, those with more than a high school education are actually 11% (OR=0.89, 95% CI: 0.83, 0.97, p=.004) less likely to report better experiences with ease of getting appointment from specialists than those with a high school or less education.

Table 5.3: Adjusted Odds Ratios for the Outcome, Ease of Getting a Specialist Appointment. By the Level of Education (MA and FFS Combined)

Variable: Education	Unadjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS	95% CI	P-value
Unadjusted			
Education More than High School (HS) (Ref: High School (HS) or less)	1.09	1.03 1.16	0.004
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS		
Race	1.05	.99 1.11	0.141

White (Ref: Nonwhite)			
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.05	.99 1.11	0.130
Gender Male (Ref: Female)	1.07	1.01 1.14	0.018
Age (65 and older (ref: less than 65)	1.09	1.03 1.16	0.003
General Health Status Category (ghs) (Ref: Excellent)	1.01	.95 1.07	0.845
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.09	1.03 1.16	0.003
Proxy (Ref: No Proxy Help)	.97	.91 1.05	0.473
Disabled (Ref: Not Disabled)	1.08	1.02 1.15	0.007
Rural Category (Ref: Rural Area)	1.11	1.04 1.17	<0.001
Dual status (Ref: Not Dual Status	.99	.94 1.06	0.871
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	.89	.83 .97	0.004
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.89	.83 .97	0.004

Table 5.4 below shows the relationship between education and the outcome variable "obtaining prescription drugs." Without adjusting for demographic and health variables, enrollees that have more than a high school education are about 20% (OR=1.20, 95% CI: 1.14, 1.27, p<0.0001) more likely to report better experiences with ease of getting prescription medications. Table 5.4 shows that the relationship between one's education and the outcome of "answering "always" or "usually" (better experience) for the outcome variable (obtaining prescription drugs.") does not appear to be confounded by the covariates of gender, age, comorbidities, disability and residence. Therefore, when holding all other variables constant and only looking at the individual effects of each of these variables (one at a time) on education and the outcome obtaining prescription drugs, we see that these variables do not substantially confound the relationship between education and the outcome obtaining prescription drugs.

From the Table 5.4 below, we see that the variables race, proxy, dual status, and general health status do appear to have confounding effects on this relationship. This shows that variables of race, proxy, dual status, and general health status are alternative explanations to educational attainment for explaining patient-reported ease of obtaining prescription drugs so that when taken into account, those with more than a high school education are 2% less likely to report a negative experience with ease of getting prescription medications than those with a high school education or less, but this was not statistically significant (OR=0.98, 95% CI: .91, 1.06, p=0.611).

Table 5.4: Adjusted Odds Ratios for the Outcome, Ease of Obtaining Prescription Drugs, by Level of Education (MA and FFS Combined)

Variable: Education	Unadjusted Odds Ratio for Ease of Outcome in >HS	95% CI	P-value

	versus ≤ HS		
Unadjusted			
Education More than High School (HS) (Ref: High School (HS) or less)	1.20	1.14 1.27	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS		
Race White (Ref: Nonwhite)	1.13	1.07 1.20	<0.0001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.13	1.07 1.20	<0.0001
Gender White (Ref: female)	1.22	1.15 1.29	<0.0001
Age (65 and older (ref: less than 65)	1.22	1.15 1.29	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.12	1.06 1.19	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.20	1.14 1.28	<0.0001
Proxy (Ref: No Proxy Help)	1.05	.98 1.13	0.189
Dual status (Ref: Not Dual Status)	1.13	1.07 1.20	<0.0001
Disabled (Ref: Not Disabled)	1.21	1.14 1.28	<0.0001
Rural Category (Ref: Rural Area)	1.22	1.15 1.29	<0.0001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and	.98	.91 1.06	0.611

Native Americans)			
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.98	.91 1.06	0.597

The tables above show the variables that are found to be confounders on the relationship between education attainment and each of the dependent variables. We can see from the table that in general, the variables of race, general health status, proxy, dual status, and residency are found to be common confounders on the relationship between education and the four outcome variables. These confounding variables appear to have contributed to the differences between the unadjusted odds ratio and adjusted odds ratio for each of the outcome variables.

Hypothesis 2.1

The second part of hypothesis 2.1 of the confounding section hypothesized that those in MA with a high school education or less will report worst experience than those in FFS with a high school education or less.

Table 5.5 below shows the relationship of insurance type (for only those with a high school education or less) on the outcome variable "doctor's explanation" with and without adjusting for each of the demographic and health independent variables. Without adjusting, we can see that enrollees in MA are about 11% (OR=1.11, 95% CI: 1.03, 1.19, p=0.004) more likely to report better experiences with ease of understanding what their personal doctor explain to them than those in FFS.

We see from Table 5.5 that the relationship between insurance type and answering "always" or "usually" (better experience) for the outcome variable (doctor's explanation) does not appear to be confounded by gender, comorbidities, and disability. Therefore, when holding all other variables constant and only looking at the individual effects of each of these variables (one at a time) on insurance type and the outcome doctor explanations, we see that these variables do not substantially change the relationship of insurance type to the outcome of doctor's explanations.

However, we see that the variables race, age, general health status, proxy, dual status, and residence do have confounding effects on this relationship as evidenced by their individual influences on the odds ratios. This shows that race, age, general health status, proxy, dual status, and residence are alternative explanations to insurance type for explaining patient-reported understanding of doctor explanations. We see that adjusting for demographic and health covariates, enrollees in MA are 7% (OR=1.07, 95% CI: 0.98, 1.17, p=0.12) more likely to report better experience than those in FFS; however, this was not statistically significant (p=0.12).

Table 5.5: Adjusted Odds Ratios for Ease of Outcome by Insurance Type (MA vs. FFS) for Enrollees with HS or Less Education- Outcome: Doctor's Explanation

Variable: Insurance Type (MA vs. FFS)	Unadjusted Odds Ratio for Ease of Outcome in MA versus FFS	95% CI	P-value
Unadjusted			
Insurance Type MA (ref: FFS)	1.11	(1.03 , 1.19)	0.004
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in MA versus FFS		
Gender Male	1.11	(1.03 , 1.19)	0.004

(ref: female)			
Race White (Ref: Nonwhite)	1.06	(0.99 , 1.14)	0.085
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.06	(0.99 , 1.14)	0.090
Age (65 and older (ref: less than 65)	1.13	(1.05 , 1.21)	0.001
General Health Status Category (ghs) (Ref: Excellent)	1.16	(1.08 , 1.24)	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.11	(1.03 , 1.18)	0.005
Proxy (Ref: No Proxy Help)	1.07	(0.98 , 1.17)	0.125
Dual status (Ref: Not Dual Status)	1.13	(1.06 , 1.21)	<0.001
Disabled (Ref: Not Disabled)	1.12	(1.04 , 1.20)	0.002
Rural Category (Ref: Rural Area)	1.06	(0.99 , 1.13)	0.125
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.07	(0.98 , 1.17)	0.122
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.07	(0.98 , 1.17)	0.128

Table 5.6 below the relationship of insurance type (for only those with a high school education or less) on the outcome of "obtaining care, tests, or treatment" with and without adjusting for each of the demographic independent variables and health variables.

Without adjusting for any demographic and health variables, enrollees in MA are about 38% (OR=1.38, 95% CI: 1.27, 1.49, p<0.001) more likely to report better experiences with ease getting care, tests, or treatment than their counterparts in FFS.

We see from Table 5.6 that the relationship between insurance type and answering "always" or "usually" (better experience) for the outcome variable (obtaining care, tests, or treatment) does appear to be confounded by general health status and residency. This shows that general health status and residence are alternative explanations to educational attainment for explaining patient-reported ease of "obtaining care, tests, or treatment," so that when taken into consideration, those in MA are 33% (OR=1.33, 95% CI: 1.20, 1.47, p<0.001) more likely to report better experiences with ease of getting care, tests, or treatment as compare to those in FFS.

Table 5.6: Adjusted Odds Ratios for Ease of Outcome by Insurance Type (MA vs. FFS) for Enrolless with a HS Education or Less - Outcome: Obtaining care, tests, or treatment

Variables: Insurance Type	Unadjusted Odds Ratio for Ease of Outcome in MA versus FFS	95% CI	P-value
Unadjusted			
Insurance Type MA (ref: FFS)	1.38	1.27 1.49	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in MA versus FFS		
Gender Male (Ref: Female)	1.38	1.27 1.49	<0.001
Race White (Ref: Nonwhite)	1.31	1.20 1.41	<0.001

Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.31	1.20 1.41	<0.001
Age (65 and older (ref: less than 65)	1.45	1.33 1.56	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.46	1.34 1.57	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.37	1.26 1.48	<0.001
Proxy (Ref: No Proxy Help)	1.35	1.22 1.49	<0.001
Disabled (Ref: Not Disabled)	1.44	1.33 1.56	<0.001
Rural Category (Ref: Rural Area)	1.29	1.18 1.39	<0.001
Dual status (Ref: Not Dual Status)	1.43	1.32 1.55	<0.001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.33	1.20 1.47	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.33	1.20 1.47	<0.001

Table 5.7 below looks at the relationship of insurance type for those with a high school education or less on the outcome variable "getting specialist appointment" with and without adjusting for each of the independent demographic variables and health variables. We can see that without adjusting for any demographic variables, enrollees in MA with a high school education or less are about 18% (OR=1.18, 95% CI: 1.09, 1.27, p<0.001)

more likely to report better experiences with ease of getting appointments from specialist than those FFS .

We see from Table 5.7 that the relationship between insurance type and answering "always" or "usually" (better experience) for the outcome variable (getting specialist appointment) does appear to be confounded by race, general health status, disability, dual status, and residency. This shows that race, general health status, disability, dual status, and residency are alternative explanations to educational attainment for explaining patient-reported ease of getting specialist appointment so that when taken into consideration, those in MA are 14% (OR=1.14, 95% CI: 1.04, 1.26, P=.007) more likely to report better experiences with ease of getting appointments from specialist compare to those in FFS.

Table 5.7: Adjusted Odds Ratios for Ease of Outcome by Insurance Type (MA vs. FFS) Among Enrollees with HS or Less Education - Outcome: Getting Specialist Appointment

Variable: Insurance Type	Unadjusted Odds Ratio for Ease of Outcome in MA versus FFS	95% CI	P-value
Unadjusted			
Insurance Type MA (ref: FFS)	1.18	1.09 1.27	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in MA versus FFS		<0.001
Gender Male (Ref: Female)	1.18	1.09 1.27	<0.001
Race White (Ref: Nonwhite)	1.12	1.04 1.21	0.003
Race	1.13	1.04 1.22	0.003

(Excluding Unknowns and Native Americans) White (Ref: Nonwhite)			
Age (65 and older (ref: less than 65)	1.20	1.12 1.30	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.22	1.13 1.32	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.17	1.08 1.26	<0.001
Proxy (Ref: No Proxy Help)	1.15	1.05 1.26	0.003
Disabled (Ref: Not Disabled)	1.21	1.12 1.30	0.003
Rural Category (Ref: Rural Area)	1.13	1.04 1.22	<0.001
Dual status (Ref: Not Dual Status)	1.21	1.12 1.31	<0.001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.14	1.04 1.26	0.006
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.14	1.04 1.25	0.007

Table 5.8 below looks at the relationship of insurance type (for only those with a high school education or less) on the outcome variable of "obtaining prescription drugs" with and without adjusting for each of the demographic independent variables and health variables. Without adjusting for any demographic and health variables, enrollees in MA do not differ statistically in their experiences with ease of getting prescriptions drugs when compared to enrollees in FFS (OR=1.00, 95% CI: 0.94, 1.07, p=.916).

We see from Table 5.8 that the relationship between insurance type and answering "always" or "usually" (better experience) for the outcome variable (getting prescriptions drugs) does appear to be confounded by race, age, general health status, proxy, disability, dual status, and residency. This shows that race, age, general health status, disability, dual status, proxy, and residency are alternative explanations to educational attainment for explaining patient-reported ease of getting prescription drugs, so that when taken into consideration, those in MA 11% (OR=0.89, 95% CI: 0.81, 0.97, p=.010) less likely to report better experiences with ease of getting prescriptions drugs when compared to enrollees in FFS.

Table 5.8: Adjusted Odds Ratios for Ease of Outcome by Insurance Type (MA vs. FFS) Among Enrolles with HS or Less Education - Outcome: Obtaining Prescription Drugs

Variables: Insurance Type	Unadjusted Odds Ratio for Ease of Outcome in MA versus FFS	95% CI	P-value
Unadjusted			
Insurance Type MA (ref: FFS)	1.00	0.94 1.07	0.916
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in MA versus FFS		
Gender Male (Ref: Female)	1.00	0.93 1.06	0.903
Race White (Ref: Nonwhite)	0.95	0.89 1.01	0.111
Race (Excluding Unknowns and Native Americans) White	0.95	0.89 1.01	0.105

(Ref: Nonwhite)			
Age (65 and older (ref: less than 65)	1.03	0.97 1.10	0.313
General Health Status Category (ghs) (Ref: Excellent)	1.05	0.98 1.12	0.146
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.00	0.94 1.07	0.988
Proxy (Ref: No Proxy Help)	0.92	0.84 1.00	0.042
Dual status (Ref: Not Dual Status)	1.04	0.98 1.11	0.198
Disabled (Ref: Not Disabled)	1.04	0.98 1.11	0.200
Rural Category (Ref: Rural Area)	0.94	0.88 1.00	0.061
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	0.89	0.81 0.97	0.010
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	0.89	0.814 0.97	0.011

The tables above show the variables that are found to be confounders on the relationship between enrollees in MA with a high school education or less and enrollees in FFS with a high school education or less and each of the dependent variables. We can see from the table that in general, the variables of race, age, general health status, proxy, dual status, disability, and residency are found to be common confounders on the relationship between those in MA with a high school education or less and those in FFS with a high school education or less and the four outcome variables. These confounding variables

contributed to the differences between the unadjusted odds ratio and adjusted odds ratio for each of the outcome variables.

Hypothesis 2.2

In this section, the project explored the relationship of race to beneficiary experience of care with and without adjusting for demographic and health characteristics. Table shows the relationship of race (White vs nonwhite) with the outcome variable "understanding doctor explanations" with and without adjusting for each demographic and health independent variable. Table 5.9 shows that without adjusting for demographic and health variables, enrollees who are White are 68% (OR=1.68, 95% CI: 1.58, 1.78) $p<0.0001$) more likely to report better experiences with ease of understanding what their personal doctor explains to them than those that are non-whites. After adjusting for demographic and health variables, we see that enrollees who are White are 26% (OR=1.26, 95% CI:1.16, 1.38, $p<0.0001$) more likely to report better experiences with ease of understanding what their personal doctor explains to them than non-whites.

We see from Table 5.9 that the relationship between being White and answering "always" or "usually" (better experience) for the outcome variable (doctors explanation) does not appear to be confounded by education, gender, age, general health status, comorbidities, disability and residence. Therefore, when holding all other variables constant and only looking at the individual effects of each of these variables (one at a time) on race and the outcome of doctor's explanation, we see that these variables do not substantially change the relationship of race to the outcome of doctor's explanations.

However, we see that the variables of proxy (whether or not they have someone helping them complete the survey) and dual status do appear to have confounding effects on this relationship since the odds ratio in the unadjusted model (1.68) is much higher than the odds ratio of the adjusted model (1.26). This shows that proxy status and dual status are alternative explanations to race for explaining patient-reported understanding of doctor's explanations.

Table 5.9: Adjusted Odds Ratios for Ease of Outcome by Race (MA and FFS Combined) - Outcome: Doctor's Explanation

Variable: Race	Unadjusted Odds Ratio for Ease of Outcome in Whites versus Non Whites	95% CI	P-value
Unadjusted			
Race White (Ref: Nonwhite)	1.68	1.59 1.78	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in White versus Non White		
Education More than High School (HS) (Ref: High School (HS) or less)	1.65	1.55 1.76	<0.0001
Gender Male (Ref: Female)	1.67	1.58 1.78	<0.0001
Age (65 and older (ref: less than 65)	1.67	1.44 1.64	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.63	1.53 1.73	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0	1.69	1.59 1.80	<0.0001

Comorbidities)			
Proxy (Ref: No Proxy Help)	1.46	1.19 1.39	<0.0001
Dual status (Ref: Not Dual Status)	1.49	1.40 1.58	<0.0001
Disabled (Ref: Not Disabled)	1.65	1.45 1.65	<0.0001
Rural Category (Ref: Rural Area)	1.64	1.47 1.68	<0.0001
Fully Adjusted Model (not excluding Native Americans and Unknowns)	1.26	1.16 1.38	<0.0001

Table 5.10 shows the relationship of race (being White vs nonwhite) with the outcome variable of "obtaining care, tests, or treatment" with and without adjusting for each demographic and health independent variable. Table 5.10 shows that without adjusting for demographic and health variables, White enrollees are 132% (OR=2.32, 95% CI: 2.18, 2.37, $p<0.001$) more likely to report better experiences with ease of getting care, tests, or treatments than non-white enrollees. After adjusting for demographic and health variables, we see that White enrollees are 74% (OR=1.74, 95% CI: 1.59, 1.89, $p<0.001$) more likely to report better experiences with ease of getting care, tests, or treatments than non-white enrollees. We see from Table 5.10 that the relationship between being White and answering "always" or "usually" (better experience) for the outcome variable (getting care, tests, or treatments) does not appear to be confounded by any of the demographic and health covariates. Therefore, when holding all other variables constant and only looking at the individual effects of each of these variables (one at a time) on

race and the outcome, we see that these variables do not substantially change the relationship of race to the outcome "getting care, tests, or treatments."

Table 5.10: Adjusted Odds Ratios for Ease of Outcome by Race (MA and FFS Combined) - Outcome: Getting Care, Tests, and Treatments

Variable: Race	Unadjusted Odds Ratio for Ease of Outcome in Whites versus Non White	95% CI	P-value
Unadjusted			
Race White (Ref: Nonwhite)	2.32	2.18 2.47	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in Whites versus Non White		
Education More than High School (HS) (Ref: High School (HS) or less)	2.29	2.15 2.45	<0.0001
Gender Male (Ref: Female)	2.32	2.17 2.47	<0.0001
Age (65 and older (ref: less than 65)	2.18	2.04 2.33	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	2.25	2.11 2.40	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	2.34	2.20 2.49	<0.0001
Proxy (Ref: No Proxy Help)	2.16	1.99 2.34	<0.0001
Disabled (Ref: Not Disabled)	2.17	2.04 2.32	<0.0001
Rural Category (Ref: Rural Area)	2.21	1.03 1.17	0.003

Dual status (Ref: Not Dual Status)	2.05	1.01 1.14	0.030
Fully Adjusted Model (not excluding Native Americans and Unknowns)	1.74	1.59 1.89	<0.001

Table 5.11 looks at the effects of race (White vs nonwhite) on the outcome variable of "getting specialist appointments" with and without adjusting for any demographic and health variables. Without adjusting, White enrollees are about 94% (OR=1.94, 95% CI: 1.82, 20.6, p<0.001) more likely to report better experiences with ease of getting appointments from specialist than non-whites. After adjusting for demographic and health variables, we see that White enrollees are 51% (OR=1.51, 95% CI: 1.38, 1.64, p<0.001) more likely to report better experiences with ease of getting appointments from specialists than non-white enrollees.

We see from Table 5.11 that the relationship between being White and answering "always" or "usually" (better experience) for the outcome variable (getting specialist appointment) is not confounded by education, gender, age, general health status, comorbidities, proxy, disability and residence. However, we see that the variable of dual status does appear to have a confounding effect on this relationship. This shows that dual status has an alternative explanation to race for explaining patient-reported ease of getting a specialist appointment.

Table 5.11: Adjusted Odds Ratios for Ease of Outcome by Race (MA and FFS Combined) - Outcome: Getting Specialist Appointments

Variable: Race	Unadjusted Odds Ratio for Ease of Outcome in Whites versus Non Whites	95% CI	P-value
Unadjusted			

Race White (Ref: Nonwhite)	1.94	1.82 2.06	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in White versus Non White		
Education More than High School (HS) (Ref: High School (HS) or less)	1.92	1.80 2.04	<0.001
Gender Male (Ref: Female)	1.92	1.80 2.04	<0.001
Age (65 and older (ref: less than 65)	1.81	1.70 1.93	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.86	1.74 1.98	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.93	1.82 2.06	<0.001
Proxy (Ref: No Proxy Help)	1.85	1.72 2.00	<0.001
Disabled (Ref: Not Disabled)	1.83	1.72 1.95	<0.001
Rural Category (Ref: Rural Area)	1.87	1.76 1.99	<0.001
Dual status (Ref: Not Dual Status)	1.71	1.60 1.82	<0.001
Fully Adjusted Model (not excluding Native Americans and Unknowns)	1.51	1.38 1.64	<0.001

Table 5.12 below looks at the relationship of race on the outcome variable "getting prescription drugs." The table shows the odds ratio of the unadjusted as well as the

adjusted model for race on the outcome variable of "getting prescription drugs". Without adjusting for demographic and health variables, White enrollees are about 101% (OR=2.01, 95% CI: 1.91, 2.12, p<0.0001) more likely to report better experiences with ease of getting prescription medications than non-whites. After adjusting for demographic and health variables, we see that White enrollees are 75% (OR=1.72, 95% CI: 1.62, 1.89, p<0.0001) more likely to report better experiences with ease of getting prescription drugs than enrollees that are non-whites. From Table 5.12, we see that the relationship between being White and answering "always" or "usually" (better experience) for the outcome variable (getting prescription drugs) does not appear to be confounded by any of the demographic and health variables.

Table 5.12: Adjusted Odds Ratios for Ease of Outcome by Race (MA and FFS Combined)-: Outcome: Getting Prescription Drugs

Variable: Race	Unadjusted Odds Ratio for Ease of Outcome in Whites versus Non Whites	95% CI	P-value
Unadjusted			
Race White vs. nonwhites (Unadjusted)	2.01	1.91 2.12	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in White versus Non White		
Education More than High School (HS) (Ref: High School (HS) or less)	1.95	1.85 2.06	<0.0001
Gender Male (Ref: Female)	2.03	1.93 2.15	<0.0001
Age (65 and older (ref: less than 65)	1.94	1.83 2.05	<0.0001

General Health Status Category (ghs) (Ref: Excellent)	1.95	1.85 2.06	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	2.02	.90 1.04	<0.0001
Proxy (Ref: No Proxy Help)	1.94	1.81 2.08	0.189
Dual status (Ref: Not Dual Status)	1.90	1.80 2.01	<0.0001
Disabled (Ref: Not Disabled)	1.94	1.84 2.05	<0.0001
Rural Category (Ref: Rural Area)	1.96	1.86 2.08	<0.0001
Fully Adjusted Model (not excluding Native Americans and Unknowns)	1.75	1.62 1.89	<0.0001

The table above summarizes the variables that are found to be confounders on the relationship race and each of the dependent variables. We can see from the table that the variables of proxy and dual status are found to be confounders on the relationship between race and some of the four outcome variables. These confounding variables contributed to the differences between the unadjusted odds ratio and adjusted odds ratio for each of the outcome variables.

Hypothesis 2.3

This section explored the relationship of age to beneficiary experience of care with and without adjusting for demographic and health characteristics. In section I, we looked at whether enrollees in MA and FFS who are 65 and older are more likely to report a positive experience with obtaining care than enrollees in MA and FFS who are younger than 65 after adjusting for socio-demographics and health characteristics.

In this section, the project will look at whether the demographic and health variables have a confounding effect on the relationship between age (65 or older versus younger than 65) and experience of care among enrollees .Without adjusting for demographic and health variables, enrollees that are 65 and older in both MA and FFS are 32% (OR=1.32, 95% CI: 1.23, 1.41, $p<0.0001$) more likely to report better experiences with ease of understanding what their personal doctor explains to them than enrollees who are younger than 65 in both MA and FFS. When individual demographic and health covariates are introduced as independent variables the odds ratio for age may change. After adjusting for individual demographic and health covariates, we see that those who are 65 and older in both settings are 5% (OR=0.95, 95% CI: 0.75, 1.20, $p=0.64$) less likely to report better experiences with ease of doctor's explanation compared to those who are less than 65 in both settings although not statistically significant ($p=0.64$).

We see from Table 5.13 that the relationship between being 65 and older and answering "always" or "usually" (better experience) for the outcome variable (doctors explanation) for both MA and FFS does not appear to be confounded by education, gender, comorbidities, and residence. Therefore, when looking at the individual effects of each of these variables (one at a time) on the relationship between age and the outcome of

doctor's explanation, we see that these variables do not substantially change the relationship of age to the outcome of doctor's explanations.

However, we see that the variables of race, general health status, disability, and proxy (whether or not they have someone helping them complete the survey) and dual status do have confounding effects on this relationship. This shows that proxy status, dual status, disability, race, general health status are alternative explanations to age for explaining patient-reported understanding of doctor explanations.

Table 5.13: Adjusted Odds Ratios for Ease of Outcome by Age (65 and older vs less than 65) - Outcome: Doctor's Explanation

Variables: Age	Unadjusted Odds Ratio for Ease of Outcome in 65 and older versus less than 65	95% CI	P-value
Unadjusted			
Age (65 and older (ref: less than 65)	1.32	1.23 1.41	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in 65 and older versus less than 65		
Race White (Ref: Nonwhite)	1.25	1.16 1.34	<0.0001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.25	1.16 1.34	<0.0001
Gender Male (Ref: Female)	1.32	1.23 1.42	<0.0001
Education 4 Cat More than High School (HS)	1.31	1.22 1.41	<0.0001

(Ref: High School (HS) or less)			
General Health Status Category (ghs) (Ref: Excellent)	1.09	1.01 1.17	0.022
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.31	1.22 1.41	<0.0001
Proxy (Ref: No Proxy Help)	1.40	1.28 1.53	<0.0001
Dual status (Ref: Not Dual Status)	1.11	1.04 1.20	0.004
Disabled (Ref: Not Disabled)	1.15	.96 1.38	0.141
Rural Category (Ref: Rural Area)	1.32	1.23 1.42	<0.0001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	.95	.75 1.20	0.666
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.95	.75 1.20	0.646

Table 5.14 below shows that the relationship of age and answering "always" or "usually" (better experience) for the outcome variable (getting care, tests, or treatment). Without adjusting for demographic and health variables, enrollees who are 65 and older in both MA and FFS are 117% (OR=2.17, 95% CI: 2.03, 2.32, $p<0.001$) more likely to report better experiences with ease of getting care, tests, or treatment than enrollees who are younger than 65 in both MA and FFS. After adjusting for individual demographic and health covariates, we see that those who are 65 and older in both settings are 36%

(OR=1.36, 95% CI: 1.07, 1.74, p=0.01) more likely to report better experiences with ease of getting care, tests, or treatment compared to those who are less than 65 in both settings.

From Table 5.14, we see that the relationship between age and answering "always" or "usually" (better experience) for the outcome variable (getting care, tests,or treatments) for both MA and FFS enrollees does not appear to be confounded by race, education, gender, proxy, comorbidities, and residence. Therefore, when looking at the individual effects of each of these variables (one at a time) on age and the outcome of getting care, tests, or treatment, we see that these variables do not substantially change the relationship of race to the outcome of getting care, tests, or treatment. However, we see that the variables general health status, disability, and dual status do have confounding effects on this relationship. This shows that dual status, disability, general health status have a confounding effect on the relationship between age and the outcome getting care, tests, or treatment and are alternative explanations to age for explaining patient-reported ease of getting care, tests, or treatments.

Table 5.14: Adjusted Odds Ratios for Ease of Outcome by Age (MA and FFS Combined) - Outcome: Getting Care, Tests, and Treatment

Variables: Age	Unadjusted Odds Ratio for Ease of Outcome in 65 and older versus less than 65	95% CI	P-value
Unadjusted:			
Age (65 and older (ref: less than 65)	2.17	2.03 2.32	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in 65 and older versus less than 65		

Race White (Ref: Nonwhite)	1.99	1.86 2.13	<0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.99	1.86 2.13	<0.001
Gender Male (Ref: Female)	2.16	2.02 2.32	<0.001
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	2.16	2.01 2.31	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.86	1.73 1.99	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	2.16	2.02 2.31	<0.001
Proxy (Ref: No Proxy Help)	2.19	2.02 2.38	<0.001
Dual status (Ref: Not Dual Status)	1.85	1.72 1.98	<0.001
Rural Category (Ref: Rural Area)	2.19	2.05 2.35	<0.001
Disabled (Ref: Not Disabled)	1.47	1.23 1.77	<0.001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.36	1.07 1.74	0.013
Fully Adjusted Model (adjusted for all variables; including unknowns and Native	1.36	1.07 1.74	0.012

Americans)			

Table 5.15 below shows that the relationship between being 65 and older and answering "always" or "usually" (better experience) for the outcome variable (getting specialist appointment). Without adjusting for demographic and health variables, enrollees who are 65 and older in both MA and FFS are 86% (OR=1.86, 95% CI: 1.75, 1.99, $p<0.001$) more likely to report better experiences with ease of getting specialist appointment than enrollees who are younger than 65 in both MA and FFS. After adjusting for individual demographic and health covariates, we see that those who are 65 and older in both settings are 55% (OR=1.55, 95% CI: 1.21, 1.96, $p=0.001$) more likely to report better experiences with ease of getting specialist appointment compared to those who are less than 65 in both settings.

Table 5.15 below, we see that the relationship between being 65 and older and answering "always" or "usually" (better experience) for the outcome variable "getting specialist appointment" for both MA and FFS enrollees does not appear to be confounded by race, education, gender, proxy, comorbidities, proxy, and residence. Therefore, when looking at the individual effects of each of these variables (one at a time) on age and the outcome of getting specialist appointment, we see that these variables not substantially modify change the relationship of age to the outcome getting specialist appointment. However, we see that the variables of general health status and dual status do have confounding effects on this relationship. This shows that dual status and general health status are alternative explanations to age for explaining patient-reported ease of getting specialist appointment.

Table 5.15: Adjusted Odds Ratios for Ease of Outcome by Age (MA and FFS Combined) - Outcome: Getting Specialist Appointment

Variables: Age	Unadjusted Odds Ratio for Ease of Outcome in 65 and older versus less than 65	95% CI	P-value
Unadjusted:			
Age (65 and older) (ref : less than 65)	1.86	1.75 1.99	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in 65 and older versus less than 65		
Race White (Ref: Nonwhite)	1.73	1.62 1.85	<0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.74	1.63 1.86	<0.001
Gender Male (Ref: Female)	1.85	1.74 1.98	<0.001
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.87	1.75 1.99	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.62	1.51 1.73	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.86	1.75 1.99	<0.001
Proxy	1.89	1.75 2.05	<0.001

(Ref: No Proxy Help)			
Dual status (Ref: Not Dual Status)	1.60	1.50 1.72	<0.001
Disabled (Ref: Not Disabled)	1.73	1.44 2.08	<0.001
Rural Category (Ref: Rural Area)	1.87	1.76 2.00	<0.001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.56	1.22 1.98	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.54	1.21 1.9	<0.001

Table 5.16 below shows that the relationship of being 65 and older and answering "always" or "usually" (better experience) for the outcome variable (getting prescription drugs). Without adjusting for demographic and health variables, enrollees that are 65 and older in both MA and FFS are 70% (OR=1.70, 95% CI: 1.60 1.80, p<0.001) more likely to report better experiences with ease of getting specialist appointment than enrollees who are younger than 65 in both MA and FFS. After adjusting for individual demographic and health covariates, we see that those who are 65 and older in both settings are 32% (OR=1.32, 95% CI:1.06, 1.65, p<0.01) more likely to report better experiences with ease of getting prescription drugs compared to those who are less than 65 in both settings. From Table 5.16 below, we see that the relationship between being 65 and older and answering "always" or "usually" (better experience) for the outcome variable "getting prescription drugs" for both MA and FFS enrollees does not appear to be confounded by race, education, gender, comorbidities, and residence. The covariates

general health status, dual status, disability, and proxy do appear to have confounding effects on this relationship). This shows that the variables of general health status, dual status, disability, and proxy are alternative explanations to age for explaining patient-reported ease of getting prescription drugs.

Table 5.16: Adjusted Odds Ratios for Ease of Outcome by Age (MA and FFS Combined): Getting Prescription Drugs.

Variables: Age	Unadjusted Odds Ratio for Ease of Outcome in 65 and older versus less than 65	95% CI	P-value
Unadjusted:			
Age (65 and older (ref: less than 65)	1.70	1.61 1.80	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in 65 and older versus less than 65		
Race White (Ref: Nonwhite)	1.60	1.51 1.70	<0.0001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.61	1.52 1.71	<0.0001
Gender Male (Ref: Female)	1.70	1.61 1.80	<0.0001
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.73	1.62 1.83	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.46	1.37 1.56	<0.0001

Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.70	1.61 1.80	<0.0001
Proxy (Ref: No Proxy Help)	1.87	1.73 2.02	<0.0001
Dual status (Ref: Not Dual Status)	1.56	1.46 1.66	<0.0001
Disabled (Ref: Not Disabled)	1.32	1.13 1.56	0.001
Rural Category (Ref: Rural Area)	1.72	1.61 1.82	<0.0001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.33	1.06 1.66	0.013
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.32	1.06 1.65	0.013

The tables above show the variables that are found to be confounders on the relationship age (<65 and 65+) and each of the dependent variables. We can see from the table that the variables of proxy, dual status, general health status, and disability are found to be confounders on the relationship between age (<65 and 65+) and the four outcome variables. These confounding variables contributed to the differences between the unadjusted odds ratio and adjusted odds ratio for each of the outcome variables.

Hypothesis 2.3 –Sub-Analysis: Analysis looking at experiences of care for ages 75 and older versus younger than 75

A sub analysis to Hypothesis 2.3 also looked at experiences of care between those that are 75 years and older compared to those that are younger than 75 in both MA and FFS unadjusted and after adjusting for education, race, gender, age, general health status, region, comorbidity, proxy, dual status, and disability. This sub analysis explored whether any of the demographic independent and health variables have a confounding effect on the relationship between age (being 75 and older or younger than 75) and experience with care.

Table 5.17 looks at the relationship of being 75 and older and answering "always" or "usually" (better experience) for the outcome variable of (doctor's explanation). Without adjusting for demographic and health variables, enrollees that are 75 and older in both MA and FFS are 2% less likely to report better experiences with understanding doctors explanation than enrollees who are younger than 75 in both MA and FFS; however, this relationship is not significant (OR= 0.98, 95% CI: 0.93, 1.04, $p<0.591$). After adjusting for individual demographic and health covariates, we see that those who are 75 and older in both settings are 4% less likely to report better experiences with understanding doctor's explanation compared to those who are less than 75 in both settings. Again, this relationship is not significant (OR=0.96, 95% CI:0.88, 1.04, $p=0.35$).

In Table 5.17 below, we see that the relationship between being 75 and older and answering "always" or "usually" (better experience) for the outcome variable "understanding doctor's explanation" for both MA and FFS enrollees does not appear to be confounded by education, comorbidities, and residence. Therefore, when looking at the individual effects of each of these variables (one at a time) on age and the outcome of

understanding doctor's explanation we see that these variables do not substantially change the relationship of age to the outcome.

However, we see that the variables of gender, race, general health status, disability, proxy (whether or not they have someone helping them complete the survey) and dual status appear to confound this relationship. This shows that education, race, general health status, disability, proxy and dual status are alternative explanations to age for explaining patient-reported ease of understanding doctor's explanation.

Table 5.17: Adjusted Odds Ratios for Ease Outcome by Age (75 and older vs. younger than 75) (MA and FFS Combined) - Outcome: Doctor's Explanation

Variables: Age	Unadjusted Odds Ratio for Ease of Outcome in 75 and older versus less than 75	95% CI	P-value
Unadjusted:	Adjusted Odds Ratio for Ease of Outcome in 75 and older versus less than 75		
Age 75 and older (ref: younger than 75)	.98	.93 1.04	0.591
Adjusted For:			
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less))	.99	.94 1.06	0.961
Race White (Ref: Nonwhite)	.96	.90 1.01	0.129
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	.96	.90 1.01	0.130

Gender Male (Ref: Female)	.99	.93 1.05	0.664
General Health Status Category (ghs) (Ref: Excellent)	.95	.89 1.01	0.111
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	.98	.93 1.04	0.599
Proxy (Ref: No Proxy Help)	1.06	.98 1.14	0.129
Dual status (Ref: Not Dual Status)	.94	.88 .99	0.028
Disabled (Ref: Not Disabled)	.89	.83 .94	<0.001
Rural Category (Ref: Rural Area)	.99	.94 1.05	0.820
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	.96	.88 1.04	0.34
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.96	.88 1.04	0.35

From Table 5.18, we see that the relationship being 75 and older and answering "always" or "usually" (better experience) for the outcome variable of "obtaining care, tests, or treatment."). Without adjusting for demographic and health variables, enrollees that are 75 and older are 55% (OR=1.55, 95% CI: 1.45, 1.66, p<0.001) more likely to report better experiences with ease of getting specialist appointment than enrollees who are younger than 75, in both MA and FFS. After adjusting for individual demographic and

health covariates, we see that those who are 75 and older in both settings are 27% (OR=1.27, 95% CI< 1.16, 1.39,p<0.001) more likely to report better experiences with ease of obtaining care, tests, or treatment compared to those who are less than 75 in both settings.

In Table 5.18 below, we see that the relationship between being 75 and older and answering "always" or "usually" (better experience) for the outcome variable "obtaining care, tests, or treatment" does not appear to be confounded by race, education, gender, proxy, comorbidities, dual status, general health status, and residence. Therefore, when only looking at the individual effects of each of these variables (one at a time) on age categories and the outcome obtaining care, tests, or treatment, we see that these variables do not substantially change the relationship of age to the outcome of obtaining care, tests, or treatment. However, we see that the variable of disability does have a confounding effect on this relationship. This shows that disability has an alternative explanation to age for explaining patient-reported ease of obtaining care, tests, or treatment.

Table 5.18: Adjusted Odds Ratios for Ease of Outcome by Age (75 and older vs. younger than 75) (MA and FFS Combined) - Outcome: Obtaining Care, Tests, or Treatment

Variables: Age	Unadjusted Odds Ratio for Ease of Outcome in 75 and older versus less than 75	95% CI	P-value
Unadjusted:			
Age 75 and older (ref: younger than 75)	1.55	1.45 1.66	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in 75 and older versus less		

	than 75		
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.54	1.43 1.64	<0.001
Race White (Ref: Nonwhite)	1.48	1.39 1.59	<0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.48	1.38 1.58	<0.001
Gender Male (Ref: Female)	1.56	1.45 1.66	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.53	1.43 1.64	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.55	1.45 1.66	<0.001
Proxy (Ref: No Proxy Help)	1.59	1.46 1.72	<0.001
Disabled (Ref: Not Disabled)	1.21	1.13 1.31	<0.001
Rural Category (Ref: Rural Area)	1.58	1.48 1.69	<0.001
Dual status (Ref: Not Dual Status)	1.46	1.36 1.56	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.27	1.16 1.39	<0.001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.26	1.15 1.39	<0.001

From Table 5.19, we see that the relationship between being 75 and older and answering "always" or "usually" (better experience) for the outcome variable of "getting a specialist appointment". Without adjusting for demographic and health variables, enrollees that are 75 and older are 37% (OR=1.37, 95% CI: 1.29, 1.45, p<0.001) more likely to report better experiences with ease of getting specialist appointment than enrollees who are younger than 75, in both MA and FFS. After adjusting for individual demographic and health covariates, we see that those who are 75 and older in both settings are 11% (OR= 1.11, 95% CI: 1.03, 1.21, p<0.001) more likely to report better experiences with ease of obtaining care, tests, or treatment compared to those who are less than 75 in both settings. In Table 5.19 below, we see that the relationship between being 75 and older and answering "always" or "usually" (better experience) for the outcome variable "getting specialist appointment" for both MA and FFS enrollees does not appear to be confounded by race, education, gender, proxy, comorbidities, general health status, proxy, and residence. Therefore, when holding all other variables constant and only looking at the individual effects of each of these variables (one at a time) on age and the outcome of getting a specialist appointment, we see that these variables do not substantially change the relationship of age to the outcome. However, we see that the variables of dual status and disability do have confounding effects on this relationship. This shows that dual status and disability have alternative explanations to age for explaining patient-reported ease of obtaining care, tests, or treatment.

Table 5.19: Adjusted Odds Ratios for Ease of Outcome by Age (75 and older vs. younger than 75) (MA and FFS Combined) - Outcome: Getting specialist appointment

Variables: Age	Unadjusted Odds	95% CI	P-value

	Ratio for Ease of Outcome in 65 and older versus less than 65		
Unadjusted:			
Age 75 and older (ref: younger than 75) (Unadjusted)	1.37	1.29 1.4	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in 75 and older versus less than 75		
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.37	1.28 1.46	<0.001
Race White (Ref: Nonwhite)	1.32	1.24 1.41	<0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.32	1.24 1.41	<0.001
Gender Male (Ref: Female)	1.38	1.29 1.46	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.33	1.25 1.42	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.36	1.28 1.45	<0.001
Proxy (Ref: No Proxy Help)	1.34	1.24 1.44	<0.001
Disabled (Ref: Not Disabled)	1.14	1.06 1.22	<0.001
Rural Category (Ref: Rural Area)	1.38	1.30 1.47	<0.001

Dual status (Ref: Not Dual Status)	1.29	1.22 1.38	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.11	1.03 1.21	0.011
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.11	1.02 1.21	0.012

From Table 5.20, we see the adjusted and unadjusted relationship between of being 75 and older and answering "always" or "usually" (better experience) for the outcome variable (obtaining prescription drugs). Without adjusting for demographic and health variables, enrollees that are 75 and older are 22% (OR=1.22, 95% CI: 1.16, 1.29, p<0.001) more likely to report better experiences with ease of obtaining prescription drugs than enrollees who are younger than 75, in both MA and FFS. After adjusting for individual demographic and health covariates, we see that those who are 75 and older in both settings are 15% (OR=1.15, 95% CI: 1.06, 1.25, p<0.001) more likely to report better experiences with ease of obtaining prescription medication compared to those who are less than 75 in both settings.

In Table 5.20 below, we see that the relationship between being 75 and older and answering "always" or "usually" (better experience) for the outcome variable "obtaining prescription drugs" for both MA and FFS enrollees does not appear to be confounded by race, gender, comorbidities, dual status, and comorbidities.. Therefore, when only looking at the individual effects of each of these variables (one at a time) on age categories and the outcome of obtaining prescription drugs, we see that these variables do not substantially change the relationship of age to the outcome. However, we see that the

variables of disability, proxy, education, and residency do have confounding effects on this relationship. This shows that disability, proxy, education, and residency have alternative explanation to age for explaining patient-reported ease of obtaining prescription drugs.

Table 5.20: Adjusted Odds Ratios for Ease of Outcome by Age (75 and older vs. younger than 75) (MA and FFS Combined) - Outcome: Obtaining Prescription Drugs

Variables: Age	Unadjusted Odds Ratio for Ease of Outcome in 75 and older versus less than 75	95% CI	P-value
Unadjusted:			
Age 75 and older (ref: younger than 75 (univariate)	1.22	1.16 1.29	<0.001
Adjusted For:	Adjusted Odds Ratio for Ease of Outcome in 75 and older versus less than 75		
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.29	1.22 1.37	<0.001
Race White (Ref: Nonwhite)	1.22	1.16 1.29	<0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.22	1.16 1.30	<0.001
Gender Male (Ref: Female)	1.25	1.19 1.32	<0.001
General Health Status	1.22	1.16 1.29	<0.001

Category (ghs) (Ref: Excellent)			
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.26	1.19 1.33	<0.001
Proxy (Ref: No Proxy Help)	1.39	1.29 1.49	<0.001
Dual status (Ref: Not Dual Status)	1.22	.99 1.13	<0.001
Disabled (Ref: Not Disabled)	1.06	.99 1.13	0.07
Rural Category (Ref: Rural Area)	1.28	1.21 1.35	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.15	1.06 1.25	<0.001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.15	1.06 1.25	<0.001

The tables above summarizes the variables that are found to be confounders on the relationship age (<75 and 75+) and each of the dependent variables. We can see from the table that the variables of proxy, dual status, and disability are found to be confounders on the relationship between age (<75 and 75+) and the four outcome variables. These confounding variables contributed to the differences between the unadjusted odds ratio and adjusted odds ratio for each of the outcome variables.

Hypothesis 2.4

In this section, the project explored the relationship of gender to beneficiary experience of care with and without adjusting for demographic and health characteristics.

The purpose is to determine if the relationship of gender to experience with care is confounded by any of the demographic and health characteristics.

Table 5.21 below shows the relationship of gender with the outcome variable "understanding doctor explanations" with and without adjusting for each demographic and health independent variable. Without adjusting for demographic and health variables, enrollees that are male are about 6% more likely to report better experiences with ease of understanding what their personal doctor explains to them than enrollees that are females in both MA and FFS; this relationship is not statistically significant (OR=1.06, 95% CI: 0.96, 1.08, p=0.542).

We see from Table 5.21 that the relationship between one's gender and answering "always" or "usually" understanding the doctor's explanations does not appear to be confounded by the covariates of age, and residence. Therefore, when only looking at the individual effects of each of these variables (one at a time) on gender and the outcome doctor explanations, we see that these variables do not substantially change the relationship of gender to the outcome of doctor's explanations. In other words, even after adjusting for demographic and health covariates, enrollees who are male do not appear to be more likely to report better experience than females, in both MA and FFS.

However, we see that the variables of proxy (whether or not they report someone helping them complete the survey), race, education, comorbidities, proxy, dual status, disability, general health status do have confounding effects on this relationship. This shows that

proxy status, race, education, and general health status are alternative explanations to gender for explaining patient-reported understanding of doctor explanations.

Table 5.21: Adjusted Odds Ratios for Ease of Outcome by Gender (MA and FFS Combined): Doctors Explanation

Variables: Gender	Unadjusted Odds Ratio for Ease of Outcome in males versus females	95% CI	P-value
Unadjusted:			
Gender Male (ref: Female (Unadjusted)	1.06	.96 1.08	<0.542
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in males versus females.		
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.02	.94 1.06	0.961
Race White (Ref: Nonwhite)	1.03	.97 1.09	0.341
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.03	.97 1.09	0.361
Age (65 and older (ref: less than 65)	1.06	1.00 1.13	0.034
General Health Status Category (ghs) (Ref: Excellent)	1.03	.98 1.09	0.271
Comorbidities (4 groups = 0.1.2.3 or more)	1.07	1.01 1.13	0.023

(Ref: 0 Comorbidities)			
Proxy (Ref: No Proxy Help)	1.13	1.05 1.21	<0.001
Dual status (Ref: Not Dual Status)	.97	.92 1.03	0.375
Disabled (Ref: Not Disabled)	1.07	1.00 1.13	0.025
Rural Category (Ref: Rural Area)	1.06	.99 1.12	0.058
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.99	.92 1.07	0.817
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	.99	.92 1.07	0.798

Table 5.22 below shows that the relationship of gender and answering "always" or "usually" (better experience) for the outcome variable of "obtaining care, tests, or treatment". Without adjusting for demographic and health variables, enrollees that are male are 9% (OR=1.09, 95% CI: 1.04, 1.17, p=0.002) more likely to report better experiences with ease of obtaining care, tests, or treatment than females, in both MA and FFS. After adjusting for individual demographic and health covariates, we see that males in both settings are 1% less likely to report better experiences with ease of obtaining care, tests, or treatment compared to females in both settings. However, this relationship is not statistically significant (OR=0.99, 95% CI: 0.91, 1.07, p=0.74).

From Table 5.22 below, we see that the relationship between gender and answering "always" or "usually" (better experience) for the outcome variable "obtaining care, tests,

or treatment" for both MA and FFS enrollees does not appear to be confounded by comorbidities, residence, and proxy. Therefore, when only looking at the individual effects of each of these variables (one at a time) on gender categories and the outcome obtaining care, tests, or treatment, we see that these variables do not substantially change the relationship of gender to the outcome of obtaining care, tests, or treatment. However, we see that the variables of education, race, age, general health status, disability and dual status do have confounding effects on this relationship. This shows that the variables of race, education, age, general health status, disability, and dual status are alternative explanations to gender for explaining patient-reported ease of obtaining care, tests, or treatment.

Table 5.22: Adjusted Odds Ratios for Ease of Outcome by Gender (MA and FFS Combined) - Outcome: Obtaining Care, Tests, or Treatment

Variables: Gender	Unadjusted Odds Ratio for Ease of Outcome in males versus females	95% CI	P-value
Unadjusted:			
Gender Male (ref: Female)	1.09	1.04 1.17	0.002
Adjusted for:			
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.07	1.01 1.14	0.023
Race White (Ref: Nonwhite)	1.04	.98 1.11	0.163
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.04	.98 1.11	0.173

Age (65 and older (ref: less than 65)	1.09	1.03 1.16	0.004
General Health Status Category (ghs) (Ref: Excellent)	1.07	1.01 1.14	0.033
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.10	1.04 1.17	0.002
Proxy (Ref: No Proxy Help)	1.09	1.01 1.17	0.025
Disabled (Ref: Not Disabled)	1.09	1.03 1.16	0.003
Rural Category (Ref: Rural Area)	1.09	1.03 1.16	0.005
Dual status (Ref: Not Dual Status)	.99	.93 1.05	0.792
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.99	.91 1.07	0.743
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	.99	.91 1.07	0.769

Table 5.23 below shows that the relationship of gender and answering "always" or "usually" (better experience) for the outcome variable of "getting a specialist appointment". Without adjusting for demographic and health variables, enrollees that are male are 16% (OR=1.16, 95% CI:1.10, 1.23, $p<0.001$) more likely to report better experiences with ease of getting specialist appointment than females, in both MA and FFS. After adjusting for individual demographic and health covariates, we see that males are 5% less likely to report better experiences with ease of getting specialist appointment

as compared to females in both settings. However, this relationship is not statistically significant (OR=1.04, 95% CI:0.97, 1.12, p=0.25).

From Table 5.23 below, we see that the relationship between gender and answering "always" or "usually" (better experience) for the outcome variable of "getting a specialist appointment" does not appear to be confounded by age, disability, residence, proxy and education. Therefore, when only looking at the individual effects of each of these variables (one at a time) on gender and the outcome of getting specialist appointment, we see that these variables do not substantially change the relationship of gender to the outcome of getting a specialist appointment. However, we see that the variables of race, general health status, dual status and comorbidity do have confounding effects on this relationship. This shows that the variables of race, general health status, dual status and comorbidity are alternative explanations to gender for explaining patient-reported ease of getting specialist appointment.

Table 5.23: Adjusted Odds Ratios for Ease of Outcome by Gender (MA and FFS Combined) - Outcome: Getting Specialist Appointment

Variables: Gender	Unadjusted Odds Ratio for Ease of Outcome in males versus females	95% CI	P-value
Unadjusted:			
Male (ref: Female)	1.16	1.10 1.23	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in males versus females.		
Education 4 Cat More than High School (HS) (Ref: High School	1.15	1.09 1.22	<0.001

(HS) or less)			
Race White (Ref: Nonwhite)	1.12	1.06 1.18	<0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.12	1.06 1.18	<0.001
Age (65 and older (ref: less than 65)	1.16	1.09 1.23	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.13	1.063 1.19	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.16	1.10 1.23	<0.001
Proxy (Ref: No Proxy Help)	1.16	1.08 1.24	<0.001
Disabled (Ref: Not Disabled)	1.15	1.09 1.22	<0.001
Rural Category (Ref: Rural Area)	1.16	1.09 1.22	<0.001
Dual status (Ref: Not Dual Status)	1.06	1.00 1.12	0.047
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.04	.97 1.12	0.248
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.05	.97 1.13	0.209

Table 4.24 below shows that the relationship of gender and answering "always" or "usually" (better experience) for the outcome variable of "obtaining prescription drugs".

Without adjusting for demographic and health variables, male enrollees are 11% (OR= 0.89, 95% CI: 0.85, 0.94, p<0.001) less likely to report better experiences with ease of obtaining prescription drugs than females, in both MA and FFS. After adjusting for individual demographic and health covariates, we see that males are 16% less likely to report better experiences with ease of obtaining prescription drugs compared to females in both settings (OR= 0.84, 95% CI: 0.78, 0.90, p<0.001).

From Table 5.24 below, we see that the relationship between gender and answering "always" or "usually" (better experience) for the outcome variable "obtaining prescription drugs" for both MA and FFS enrollees is confounded by race, general health status, and dual status.. Therefore, when only looking at the individual effects of each of these variables (one at a time) on gender categories and the outcome obtaining prescription drugs, we see that these variables do substantially change the relationship of gender to the outcome obtaining prescription drugs.

Table 5.24: Adjusted Odds Ratios for Ease of Outcome by Gender (MA and FFS Combined) - Outcome: Obtaining Prescription Drugs

Variables: Gender	Unadjusted Odds Ratio for Ease of Outcome in males versus females	95% CI	P-value
Unadjusted:	Adjusted Odds Ratio for Ease of Outcome in males versus females.		
Male (ref: Female)	.89	.85 .94	<0.001
Adjusted for:			
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	.88	.83 .92	<0.001

Race White (Ref: Nonwhite)	.86	0.81 0.90	<0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	.85	.81 .89	<0.001
Age (65 and older (ref: less than 65)	.91	.86 .96	<0.001
General Health Status Category (ghs) (Ref: Excellent)	.87	.83 .92	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	.89	.85 .94	<0.001
Proxy (Ref: No Proxy Help)	.91	.85 .97	0.005
Dual status (Ref: Not Dual Status)	.85	.80 .89	<0.001
Disabled (Ref: Not Disabled)	.90	.86 .95	<0.001
Rural Category (Ref: Rural Area)	.89	.85 .94	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.84	.79 .91	<0.001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	.84	.78 .90	<0.001

The tables above show the variables that are found to be confounders on the relationship of gender and each of the dependent variables. We can see from the table that the

variables of dual status, general health status, education, and race are found to be confounders on the relationship between gender and the four outcome variables. These confounding variables contributed to the differences between the unadjusted odds ratio and adjusted odds ratio for each of the outcome variables.

Hypothesis 2.4

Table 5.25 looks at whether females in FFS report better experiences of care than females in MA for the outcome variable of "doctor's explanations" unadjusted and after adjusting for each of the independent demographic and health variables. Without adjusting for any demographic and health variables, female enrollees in MA are 13% (OR=1.13, 95% CI: 1.05, 1.21, p=0.002) more likely to report better experiences with ease of doctors explanation than females in FFS. After adjusting for individual demographic and health covariates, we see that female enrollees in MA are 12% (OR=1.12, 95% CI: 1.01, 1.23, p=0.03) more likely to report better experiences with ease of doctors explanation than females in FFS.

We see that the relationship between being female and answering "always" or "usually" (better experience) for the outcome variable (doctors explanation) does appear to be confounded by education, race, general health status, and residence. This shows that education, race, general health status, and residence are alternative explanations to gender for explaining patient-reported ease of understanding doctor's explanation. However, the relationship between being female and answering "always" or "usually" (better experience) for the outcome variable "doctor's explanation" is not confounded by age, proxy, dual status, disability, and comorbidities. Therefore, when only looking at the

individual effects of each of these variables (one at a time) on females and the outcome of doctor's explanation, we see that these variables do not substantially change the relationship between gender and the outcome of doctor's explanation.

Table 5.25: Adjusted Odds Ratios for Ease Outcome by Insurance Type among Females (females in MA and females in FFS) - Outcome: Doctor's Explanation

Variables: Insurance Type	Unadjusted Odds Ratio for Ease of Outcome females	95% CI	P-value
Unadjusted:			
Variables: Insurance Type	1.13	1.05 1.21	0.002
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in females in MA versus females in FFS		
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.09	1.01 1.18	0.024
Race White (Ref: Nonwhite)	1.09	1.01 1.17	0.027
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.09	1.01 1.17	0.027
Age (65 and older (ref: less than 65)	1.15	1.07 1.24	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.19	1.09 1.28	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.14	1.05 1.22	0.001
Proxy	1.11	1.01 1.22	0.031

(Ref: No Proxy Help)			
Dual status (Ref: Not Dual Status)	1.14	.52 .61	<0.001
Disabled (Ref: Not Disabled)	1.14	1.06 1.23	<0.001
Rural Category (Ref: Rural Area)	1.09	1.01 1.18	0.021
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.12	1.01 1.23	0.027
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.12	1.01 1.23	0.028

Table 5.26 below shows whether females in MA report better experiences of care than females in FFS for the outcome variable of "obtaining care, tests, or treatment" unadjusted and after adjusting for each of the independent demographic and health variables. Without adjusting for any demographic and health variables, female enrollees in MA are about 42% (OR=1.42, 95% CI: 1.31, 1.54, p<0.001) more likely to report better experiences with ease of obtaining care, tests, or treatment than females in FFS. After adjusting for individual demographic and health covariates, we see that female enrollees in MA are 40% (OR=1.40, 95% CI: 1.26, 1.55, p<0.001) more likely to report better experiences with ease of obtaining care, tests or treatment.

We see that the relationship between insurance type and answering "always" or "usually" (better experience) for the outcome variable of "obtaining care, tests, or treatment" among females is confounded by the variables of general health status, and residence. Therefore, when only looking at the individual effects of each of these variables (one at a

time) on insurance type and the outcome of obtaining care, tests, or treatment, we see that these variables do change the relationship of insurance type to the outcome of obtaining care, tests, or treatment, among females.

Table 5.26: Adjusted Odds Ratios for Ease Outcome by Insurance Type in Females (females in MA and females in FFS) - Outcome: Obtaining Care, Tests, or Treatment

Variables: Insurance Type	Unadjusted Odds Ratio for Ease of Outcome in females	95% CI	P-value
Unadjusted:			
Insurance Type MA (ref: FFS)	1.42	1.31 1.54	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in females in MA versus females in FFS		
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.41	1.30 1.53	<0.001
Race White (Ref: Nonwhite)	1.36	1.25 1.47	<0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.37	1.26 1.48	<0.001
Age (65 and older (ref: less than 65)	1.48	1.36 1.61	<0.001
General Health Status Category (ghs) (Ref: Excellent)	1.51	1.39 1.64	<0.001
Comorbidities (4 groups = 0.1.2.3 or more)	1.42	1.31 1.54	<0.001

(Ref: 0 Comorbidities)			
Proxy (Ref: No Proxy Help)	1.38	1.25 1.52	<0.001
Disabled (Ref: Not Disabled)	1.49	1.37 1.61	<0.001
Rural Category (Ref: Rural Area)	1.33	1.23 1.45	<0.001
Dual status (Ref: Not Dual Status)	1.46	1.35 1.59	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.39	1.25 1.54	<0.001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.40	1.26 1.55	<0.001

Table 5.27 below shows the relationship between insurance type and answering "always" or "usually" (better experience) for the outcome variable of "getting a specialist appointment", among females. Without adjusting for demographic and health variables, female enrollees in MA are 15% (OR=1.15, 95% CI: 1.07, 1.24, p<0.001) more likely to report better experiences with ease of getting specialist appointment than female enrollees in FFS. After adjusting for individual demographic and health covariates, we see that females in MA are 10% (OR=1.10, 95% CI: 0.99, 1.21, p=0.052) more likely to report better experiences with ease of getting a specialist appointment compared to females in FFS.

Table 5.27 below, we see that the relationship between insurance type and answering "always" or "usually" (better experience) for the outcome variable "getting specialist appointment" is not confounded by education, age, comorbidities, and dual status. Therefore, when only looking at the individual effects of each of these variables (one at a

time) on insurance type and the outcome of getting a specialist appointment, among females, we see that these variables do not substantially change the relationship. However, we see that the variables of race, general health status, proxy, disability, and residence do have confounding effects on this relationship. This shows that race, general health status, proxy, disability, and residence are alternative explanations to insurance type for explaining patient-reported ease of getting specialist appointment among females.

Table 5.27: Adjusted Odds Ratios for Ease of Outcome by Insurance Type (females in MA and females in FFS) - Outcome: Getting Specialist Appointment

Variables: Insurance Type	Unadjusted Odds Ratio for Ease of Outcome in females	95% CI	P-value
Unadjusted:			
Insurance Type MA (ref: FFS)	1.15	1.07 1.24	<0.001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in females in MA versus females in FFS		
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	1.14	1.06 1.23	0.001
Race White (Ref: Nonwhite)	1.11	1.03 1.19	0.008
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.12	1.03 1.20	0.004
Age (65 and older (ref: less than 65)	1.17	1.08 1.26	<0.001

General Health Status Category (ghs) (Ref: Excellent)	1.20	1.11 1.29	<0.001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.15	1.06 1.24	<0.001
Proxy (Ref: No Proxy Help)	1.09	.99 1.20	0.053
Disabled (Ref: Not Disabled)	1.18	1.10 1.27	<0.001
Rural Category (Ref: Rural Area)	1.11	1.02 1.19	0.010
Dual status (Ref: Not Dual Status)	1.16	1.08 1.25	<0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.10	0.99 1.21	0.052
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.11	1.01 1.22	0.039

Table 5.28 below shows that the relationship between insurance type and answering "always" or "usually (better experience) for the outcome variable of "obtaining prescription drugs" Among females. Without adjusting for demographic and health variables, enrollees that are female in MA are 6% less likely to report better experiences with ease of obtaining prescription drugs than enrollees who are females in FFS; however, this relationship is statistically non-significant (OR=0.94, 95% CI:0.88, 1.01, p= 0.080). After adjusting for individual demographic and health covariates, we see that females in MA are 12% (OR=0.88, 95% CI0.80, .097: p=0.01) less likely to report better experiences with ease of obtaining prescription drugs compared to females in FFS.

From Table 5.28 below, we see that the relationship between insurance type and answering "always" or "usually" (better experience) for the outcome variable of "obtaining prescription drugs", among females, is not confounded by education and co-morbidities. Therefore, when only looking at the individual effects of each of these variables (one at a time) on gender categories and the outcome of obtaining prescription drugs, we see that these variables do not substantially change the relationship of insurance type to the outcome of obtaining prescription drugs. However, we see that the variables of race, age, general health status, proxy, dual status, disability, and residence do have confounding effects on this relationship. This shows that race, age, general health status, proxy, dual status, disability, and residence are alternative explanations to insurance type for explaining patient-reported ease of obtaining prescription drugs.

Table 5.28: Adjusted Odds Ratios for Ease of Outcome by Insurance Type (females in MA and females in FFS) - Outcome: Obtaining Prescription Drugs

Variables: Insurance Type	Unadjusted Odds Ratio for Ease of Outcome in females	95% CI	P-value
Unadjusted:			
Insurance Type MA (ref: FFS)	.94	.88 1.01	0.080
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in females in MA versus females in FFS		
Education 4 Cat More than High School (HS) (Ref: High School (HS) or less)	0.93	.87 1.00	0.059
Race White (Ref: Nonwhite)	0.89	.83 .96	0.001

Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	0.89	.83 .96	0.001
Age (65 and older (ref: less than 65)	0.97	.91 1.05	0.460
General Health Status Category (ghs) (Ref: Excellent)	0.99	.92 1.06	0.725
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	0.94	.88 1.01	0.082
Proxy (Ref: No Proxy Help)	0.87	.80 .95	0.002
Dual status (Ref: Not Dual Status)	0.98	.91 1.05	0.538
Disabled (Ref: Not Disabled)	0.98	.91 1.05	0.580
Rural Category (Ref: Rural Area)	0.88	.82 .95	0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	0.88	.80 .97	0.013
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	0.88	.80 .97	0.011

The table above show the variables that are found to be confounders on the relationship of being female in MA vs FFS and each of the dependent variables. We can see from the table that the variables of race, general health status, residence, disability, and proxy are

found to be confounders on the relationship between being female in MA vs FFS and the four outcome variables. These confounding variables contributed to the differences between the unadjusted odds ratio and adjusted odds ratio for each of the outcome variables.

Chapter 6. Specific Results Aim 3

AIM 3: Examine the relationship of age, race, gender, education, self-reported health status, region of residence, co-morbidities, dual eligibility, and proxy assistance with survey on self-reported ease of filling a prescription, comparing the experience of enrollees in MA-PD and FFS-PD plans.

Hypothesis 3.1:

Older Medicare enrollees with diabetes are expected to be more positive about their experience in obtaining prescription medications and those enrolled in MA-PD plans are expected to be more positive than enrollees in FFS-PD after controlling for socio-demographics and health characteristics; age categories are under age 65, 65-74, and 75 and over.

Hypothesis 3.1 examines the relationship of enrollee age and insurance type to self-reported ease of obtaining prescription medications. Enrollees under age 65 and those 75 years old or more are compared to those ages 65-74 years old. The numbers of enrollees in MA-PD (N= 41,901) and FFS-PD plans (N=28,441) is smaller than the total enrollees in MA (N=53,785) and FFS (N=44,941) plans because for several reasons. Medicare enrollees may have comparable insurance coverage for medications through a Medi-gap policy, MA plans may include medications in their plan, and there are individuals with no insurance coverage for prescription drugs.

Table 6.1 shows the unadjusted odds ratio from the univariate model (without covariates) for ease with obtaining prescription medication for those that are 65 and older compared to those that are younger than 65. Without adjusting for any demographic variables, enrollees with the drug coverage who are 65 and older are about 70% more likely to report better experiences with ease of obtaining medication compared to those that are younger than 65 (OR=1.70, 95% CI: 1.60, 1.70, $p < 0.0001$) and disabled in in the combined (MA and FFS) payment plans.

The second panel in Table 6.1 examines the individual possible confounding influences of each covariate on the relationship between ease of obtaining prescription medication and age.

We see from Table 6.1 that the relationship between age and answering "always" or "usually" (better experience) for ease of obtaining prescription medication (outcome variable) is not substantially confounded by race, gender, education, comorbidities, proxy, and residence. Therefore, when only looking at the individual effects of each of these variables (one at a time) on the outcome (ease of obtaining medication), we see that these variables do not have a major impact on the relationship between age and the outcome.

However, we see that the variables of dual status, disability, and general health status do have confounding effects on this relationship. We see that the unadjusted odds ratio from the univariate model (1.70) is much higher than the odds ratio from the fully adjusted multivariable model (1.33) in the third panel of Table 6.1. This shows that dual status, disability, and general health status have a confounding effect on the relationship

between age and ease with obtaining prescription medication so that when taken into consideration, those who are 65 and older are only 33% more likely to report better experiences with ease of getting prescription medications (OR=1.33, 95% CI: 1.06, 1.66, p=0.013). The analysis below however supports the hypothesis that, in general, those that are 65 and older are much more likely to report positive experience with obtaining prescription medication than those that are younger than 65.

Table 6.1: Unadjusted and Adjusted Odds Ratios for Ease of Obtaining Prescription Medications by Age (65+ vs. < 65 years) in MA and FFS

Variable: Age	Unadjusted Odds Ratio for Ease of Outcome in Age 65+ versus <65	95% CI	P-value
Unadjusted:			
65 Years or Older (65+) (Ref: Under 65 (<65) Years Old)	1.70	1.61 1.81	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in Age 65+ versus <65		
Race White (Ref: Nonwhite)	1.60	1.51 1.70	<0.0001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.61	1.52 1.71	<0.0001
Gender Male (Ref: Female)	1.70	1.61 1.80	<0.0001
Education Category (Ref: High School or less)	1.73	1.62 1.83	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.46	1.37 1.56	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.70	1.61 1.80	<0.0001
Proxy (Ref: No Proxy Help)	1.88	1.73 2.02	<0.0001
Dual status	1.56	1.46 1.66	<0.0001

(Ref: Not Dual Status)			
Disabled (Ref: Not Disabled)	1.32	1.12 1.56	0.001
Rural Category (Ref: Rural Area)	1.72	1.61 1.82	<0.0001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.33	1.06 1.66	0.013
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.32	1.06 1.65	0.013

Table 6.2 below explores whether those in MA-PD plans report more positive experiences with ease of obtaining prescription medication than enrollees in FFS-PD after controlling for socio-demographics and health characteristics. We can see from Table 6.2 that without adjusting for any demographic variables, enrollees with the drug coverage who are in MA-PD are 4% more likely to report better experiences with ease of obtaining medication compared to those in FFS-PD. However, this is not statistically significant (OR=1.04, 95% CI: 0.99, 1.10, p=0.137)

We see from Table 6.2 that the relationship between enrollment plan (MA-PD and FFS-PD) and answering “always” or “usually” (better experience) for ease of obtaining prescription medication (outcome variable) does not appear to be confounded by gender, education, age, and comorbidities. Therefore, when only looking at the individual effects of each of these variables (one at a time) on the outcome (ease of obtaining medication), we see that these variables do not have a major impact on the relationship between enrollment plan and the outcome.

However, we see that the variables of race, proxy, dual status, disability, residence, and general health status do appear to have confounding effects on this relationship. We see that the unadjusted odds ratio in the univariate model (1.04) is a bit less than the odds

ratio in the fully adjusted multivariable model (1.12). This shows that race, proxy, dual status, disability, residence, and general health status have a confounding effect on the relationship between insurance type and ease with obtaining prescription medication. When confounding is taken into consideration, those who are in MA-PD are 12% more likely to report better experiences with ease of getting prescription medications (OR=1.12, 95% CI: 1.04, 1.21, p=0.002). The analysis below however supports the hypothesis that, in general, those enrollees in MA-PD are more likely to report positive experience with obtaining prescription medication than enrollees in FFS-PD.

Table 6.2: Unadjusted and Adjusted Odds Ratios for Ease of Obtaining Prescription Medications by Enrollment Plan

Variables: PDP Plan Type	Unadjusted Odds Ratio for Ease of Outcome in MA-PD versus FFS-PD	95% CI	P-value
Unadjusted			
PDP Plan Type MA-PD (Ref: FFS-PD)	1.04	.99 1.10	0.137
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in MA-PD versus FFS-PD		
Education Category (Ref: High School or less)	1.05	.99 1.10	0.098
Race White (Ref: Nonwhite)	1.09	1.04 1.15	0.001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.09	1.04 1.15	0.001
Gender Male (Ref: Female)	1.05	.99 1.10	0.099
Age Category (Ref: <65 Years)	1.00	.95 1.06	0.887
General Health Status Category	1.00	.94 1.05	0.899

(ghs) (Ref: Excellent)			
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.04	.99 1.10	0.136
Proxy (Ref: No Proxy Help)	1.12	1.04 1.19	0.001
Disabled (Ref: Not Disabled)	1.00	.94 1.05	0.879
Rural Category (Ref: Rural Area	1.10	1.04 1.16	0.001
Dual status (Ref: Not Dual Status)	1.00	.95 1.05	0.977
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.12	1.04 1.21	0.002
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.12	1.04 1.20	0.002

Hypothesis 3.1: Sub-analysis

Medicare enrollees with diabetes who are age 75 or older are expected to be more positive with their experience in obtaining prescription medications than those younger than 75 after controlling for socio-demographics and health characteristics.

Additional analyses for Hypothesis 3.1 explored the effects of age defined as75 and older or younger than 75 on experience of care for ease with obtaining prescription medications. The table below looked at whether beneficiaries with a drug benefit that are 75 and older are more likely to experience ease of obtaining medication compared to those that are younger than 75 in both MA and FFS.

Table 6.3 shows the unadjusted odds ratio of the univariate model (without covariates) for ease of obtaining prescription medication for those that are 75 and older compared to those that are younger than 75. Without adjusting for any demographic variables, enrollees with

the drug coverage who are 75 and older are about 26% more likely to report better experiences with ease of obtaining medication compared to those that are younger than 65 in both MA and FFS (OR =1.26, 95% CI: 1.19, 1.33, p<0.0001).

We see from Table 6.3 that the relationship between age and answering "always" or "usually" (better experience) for ease of obtaining prescription medication (outcome variable) does not appear to be confounded by race, education, comorbidities, general health status, dual status and residence. Therefore, when only looking at the individual effects of each of these variables (one at a time) on and the outcome (ease of obtaining medication), we see that these variables do not have a major impact on the relationship between age and the outcome.

However, we see that the variables of proxy, disability, and gender do appear to have confounding effects on this relationship. We see that the unadjusted odds ratio in the univariate model (1.26) is higher than the odds ratio from the fully adjusted the multivariable model (1.15). This shows that proxy status, disability, and gender have a confounding effect on the relationship between age and ease of obtaining prescription medication so that when taken into consideration, those who are 75 and older are only 15% more likely to report better experiences with ease of getting prescription medications (OR=1.15, 95% CI:1.06, 1.25, p=0.001)l. The analysis below supports that, in general, those that are 75 and older are more likely to report positive experience with obtaining prescription medication than those that are younger than 75.

Table 6.3: Unadjusted and Adjusted Odds Ratios for Ease of Obtaining Prescription Medications by Age (75 and older vs. younger than 75)

Variable: Age	Unadjusted Odds Ratio for	95% CI	P-value

	Ease of Outcome in Age 75+ versus <75		
Unadjusted			
75 Years or Older (75+) (Ref: Under 75 (<75) Years Old)	1.26	1.19 1.33	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in Age 75+ versus <75		
Race White (Ref: Nonwhite)	1.22	1.16 1.29	<0.0001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.23	1.16 1.30	<0.0001
Gender Male (Ref: Female)	1.25	1.19 1.33	<0.0001
Education Category (Ref: High School or less)	1.29	1.22 1.37	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.22	1.16 1.30	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.26	1.19 1.33	<0.0001
Proxy (Ref: No Proxy Help)	1.39	1.29 1.49	<0.0001
Dual status (Ref: Not Dual Status)	1.22	1.159 1.299	<0.0001
Disabled (Ref: Not Disabled)	1.06	1.00 1.13	0.070
Rural Category (Ref: Rural Area)	1.28	1.21 1.35	<0.0001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	1.15	1.06 1.25	0.001
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	1.15	1.06 1.25	0.001

Hypothesis 3. 2:

Whites with diabetes in both MA-PD and FFS-PD are expected to be more likely to have filled a prescription in the previous 6 months and more satisfied with their experience in obtaining prescriptions than non-whites after controlling for all other variables. However, Whites in MA-PD will be more satisfied with their experience in obtaining prescriptions medications than those in free standing PDPs.

Hypothesis 3.2 explored the effects of race (White versus non-White) on experience of care for ease with obtaining prescription medications. The tables explores whether beneficiaries with a drug benefit that are White are more likely to experience ease with obtaining medication as compared to non-whites in both MA and FFS.

Table 6.4 shows the odds ratios for ease with obtaining prescription medication for those that are white compared to non-whites (including Unknowns and Native Americans). Table 6.5 shows the odds ratios for ease with obtaining prescription medication for those that are White compared to non-whites (excluding Unknowns and Native Americans).

Tables 6.4 and 6.5 contain very similar results. We can see from both tables that without adjusting for any demographic variables, enrollees with the drug coverage who are White are about 100% more likely to report better experiences with ease of obtaining medication as compared to non-Whites. We see from the second panel of both Tables 6.4 and 6.5 that the relationship between being White and answering “always” or “usually” (better experience) for ease with obtaining prescription medication (outcome variable) does not appear to be confounded by any of the

covariates. Therefore, when only looking at the individual effects of each of these variables (one at a time) on the outcome (ease of obtaining medication), we see that none of these variables have a major impact on the relationship between being White and the outcome. The analysis below supports the hypothesis that Whites in both MA and FFS are more likely to report positive experience with obtaining prescription medication than those who are non-whites.

Table 6.4: Unadjusted and Adjusted Odds Ratios for Ease of Obtaining Prescription Medications by Race (including Unknowns and Native Americans)

Variables: PDP Plan Type	Unadjusted Odds Ratio for Ease of Outcome in White versus Nonwhite	95% CI	P-value
Unadjusted			
Race White (Ref: Nonwhite)	2.01	1.90 2.12	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in White versus Nonwhite		
Education Category (Ref: High School or less)	1.95	1.85 2.06	<0.0001
Gender Male (Ref: Female)	2.03	1.93 2.14	<0.0001
Age Category (Ref: <65 Years)	1.93	1.833 2.04	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.95	1.85 2.06	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	2.02	1.91 2.13	<0.0001
Proxy (Ref: No Proxy Help)	1.94	1.81 2.081	<0.0001
Dual status (Ref: Not Dual Status)	1.90	1.80 2.01	<0.0001
Disabled (Ref: Not Disabled)	1.94	1.84 2.05	<0.0001
Rural Category (Ref: Rural Area	1.96	1.86 2.08	<0.0001
Fully Adjusted Model (adjusted for all variables)	1.75	1.62 1.89	<0.0001

Table 6.5: Unadjusted and Adjusted Odds Ratios for Ease of Obtaining Prescription Medications by Race (excluding Unknowns and Native Americans)

Variables: PDP Plan Type	Unadjusted Odds Ratio for Ease of Outcome in White versus Nonwhite	95% CI	P-value
Unadjusted			
Race White (Ref: Nonwhite)	2.01	1.91 2.12	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in White versus Nonwhite		
Education Category (Ref: High School or less)	1.96	1.85 2.07	<0.0001
Gender Male (Ref: Female)	2.04	1.93 2.15	<0.0001
Age Category (Ref: <65 Years)	1.94	1.84 2.05	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.95	1.85 2.07	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	2.02	1.92 2.13	<0.0001
Proxy (Ref: No Proxy Help)	1.95	1.81 2.09	<0.0001
Dual status (Ref: Not Dual Status)	1.90	1.80 2.01	<0.0001
Disabled (Ref: Not Disabled)	1.95	1.84 2.05	<0.0001
Rural Category (Ref: Rural Area	1.96	1.86 2.08	<0.0001
Fully Adjusted Model (adjusted for all variables)	1.76	1.63 1.91	<0.0001

Table 6.6 below explores whether Whites in MA-PD plans are more likely to report positive experiences with ease of obtaining prescription medication than Whites in FFS-PD after adjusting for socio-demographics and health characteristics. We can see from the first panel of Table 6.6 that without adjusting for any demographic variables, enrollees with the drug coverage who are

White in MA-PD are 9% more likely to report better experiences with ease of obtaining medication compared to those who are White in FFS-PD (OR=1.09, 95% CI: 1.02, 1.16, p=0.011).

We see from the second panel of Table 6.6 that the relationship between enrollment plans and answering "always" or "usually" (better experience) for ease with obtaining prescription medication (outcome variable) , among Whites, does not appear to be confounded by gender, education, and comorbidities. Therefore, when only looking at the individual effects of each of these variables (one at a time) on the outcome (ease of obtaining medication), we see that these variables do not have a major impact on the relationship between plan type (MA-PD or FFS-PD) and the outcome for Whites.

However, we see that the variables age, proxy, dual status, disability, residence, and general health status do appear to have confounding effects on this relationship. We see that the unadjusted odds ratio in the univariate model (1.09) is a bit less than the odds ratio from the multivariable model (1.15). This shows that age, proxy, dual status, disability, residence, and general health status have a confounding effect on the relationship between enrollment plan and ease with obtaining prescription medication, among females, so that when taken into consideration, Whites in MA-PD are 15% more likely to report better experiences with ease of getting prescription medications than Whites in FFS-PD (OR =1.15, 95% CI: 1.05, 1.25, p =0.002). The analysis below supports the hypothesis that Whites in MA-PD are more likely to report positive experience with obtaining prescription medication than their White counterparts in FFS-PD.

Table 6.6: Unadjusted and Adjusted Odds Ratios for Ease of Obtaining Prescription Medications by Enrollment Plan (MA-PD vs. FFS-PD, among Whites)

Variables: PDP Plan Type	Unadjusted Odds Ratio for Ease of Outcome in MA-PD versus FFS-PD	95% CI		P-value
Unadjusted PDP Plan Type MA-PD (Ref: FFS-PD)	1.09	1.02	1.16	0.011
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in MA-PD versus FFS-PD			
Education Category (Ref: High School or less)	1.10	1.02	1.17	0.008
Gender Male (Ref: Female)	1.10	1.03	1.17	0.006
Age Category (Ref: <65 Years)	1.05	.98	1.13	0.129
General Health Status Category (ghs) (Ref: Excellent)	1.04	.97	1.11	0.225
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.09	1.02	1.17	0.010
Proxy (Ref: No Proxy Help)	1.18	1.09	1.29	<0.0001
Disabled (Ref: Not Disabled)	1.04	.98	1.12	0.222
Rural Category (Ref: Rural Area	1.12	1.05	1.20	0.001
Dual status (Ref: Not Dual Status)	1.06	.99	1.13	0.076
Fully Adjusted Model (adjusted for all variables)	1.15	1.05	1.25	0.002

Hypothesis 3.3:

Beneficiaries in MA-PD and FFS-PD with diabetes who are more educated are expected to be more satisfied with their experience in obtaining prescriptions than those who are less educated; after controlling for other variables.

Hypothesis 3.3 explored the effects of education (high school education or less versus more than a high school education) on experience of care for ease of obtaining prescription medications. The table examines whether beneficiaries in a drug plan (MA-PD and FFS-PD) who have more than a high school education are likely to experience greater ease with obtaining medication compared to those that have a high school education or less in both MA_PD and FFS-PD.

Table 6.7 shows the unadjusted odds ratio from the univariate model (without covariates) for ease with obtaining prescription medication for those that have more than a high school education compared to those with a high school education or less. Without controlling for any demographic variables, enrollees with the drug coverage who have more than a high school education are 20% more likely to report better experiences with ease of obtaining medication compared to those that that have a high school education or less, in combined MA and FFS (OR =1.20 , 95% CI:1.14, 1.27 , $p< 0.0001$).

We see from Table 6.7 that the relationship between education and answering "always" or "usually" (better experience) for ease of obtaining prescription medication (outcome variable) does not appear to be confounded by age, gender, comorbidities, disability, and residence. Therefore, when only looking at the individual effects of each of these variables (one at a time) on the outcome (ease of obtaining medication), we see that these variables do not have a major impact on the relationship between education and the outcome.

However, we see that the variables of race, dual status, proxy, and general health status do appear to have confounding effects on this relationship. We see that the unadjusted odds ratio in the univariate model (1.20) is higher than the odds ratio from the fully adjusted multivariable model (.98). This shows that race, dual status, proxy, and general health status have a confounding effect

on the relationship between education and ease with obtaining prescription medication so that when taken into consideration, those who have more than a high school education are 2% less likely (OR =.98 , 95% CI: .91 1.06, p= 0.597) than those who have a high school education or less to report better/worst experiences with ease of getting prescription medications; this is however not significant (p=0.597). However, when proxy is taken out of the model, we see that those who have more than a high school education are 10% more likely (OR =1.10, 95% CI: 1.04 1.17, p= 0.002) to report better experiences with ease of getting prescription medications than those with a high school education or less. The analysis below supports the hypothesis that those with more than a high school education are more likely to report positive experience with obtaining prescription medication (when proxy was taken out of the model) than those with less education.

Table 6.7: Unadjusted and Adjusted Odds Ratios for Ease of Obtaining Prescription Medications by Education: (high school education or more vs. less than high school education

Variable: Education	Unadjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS	95% CI	P-value
Unadjusted			
More than High School (HS) (Ref: High School (HS) or less)	1.20	1.14 1.27	<0.0001
Adjusted for:	Adjusted Odds Ratio for Ease of Outcome in >HS versus ≤ HS		
Race White (Ref: Nonwhite)	1.13	1.07 1.20	<0.0001
Race (Excluding Unknowns and Native Americans) White (Ref: Nonwhite)	1.13	1.07 1.21	<0.0001
Gender Male (Ref: Female)	1.22	1.15 1.30	<0.0001

Age (years)	1.22	1.16 1.30	<0.0001
General Health Status Category (ghs) (Ref: Excellent)	1.12	1.06 1.19	<0.0001
Comorbidities (4 groups = 0.1.2.3 or more) (Ref: 0 Comorbidities)	1.21	1.14 1.28	<0.0001
Proxy (Ref: No Proxy Help)	1.05	.98 1.13	0.189
Dual status (Ref: Not Dual Status)	1.13	1.07 1.20	<0.0001
Disabled (Ref: Not Disabled)	1.21	1.14 1.28	<0.0001
Rural Category (Ref: Rural Area)	1.22	1.15 1.29	<0.0001
Fully Adjusted Model (adjusted for all variables; excluding unknowns and Native Americans)	.98	.91 1.06	0.597
Fully Adjusted Model (adjusted for all variables; including unknowns and Native Americans)	.98	.91 1.06	0.611
Fully Adjusted Model Taking out Proxy (adjusted for all variables; excluding unknowns and Native Americans)	1.10	1.04 1.17	0.002
Fully Adjusted Model Taking out Proxy (adjusted for all variables; including unknowns and Native Americans)	1.10	1.14 1.28	0.003

Chapter 7. Summary and Discussion

This dissertation is using data from the 2009 Consumer Assessment of Healthcare Providers and Systems (CAHPS)Survey to examine beneficiary reported experience with medical care, including self-report ease of understanding ones personal physician, ease of obtaining care, tests, and procedures, ease of making an appointment with a specialist, and ease of filling prescriptions through Medicare Part D. This research examines experience with care for Medicare enrollees reporting that a doctor has told them they have diabetes, a chronic medical condition. This is believed to be the first study examining experience with medical care for Medicare beneficiaries with diabetes using the Medicare Beneficiary Survey. The findings from this study are summarized below for each of the three specific aims. The implications of the findings are discussed after the results.

Aim 1:

Aim 1 examines differences in MA and FFS diabetic patient characteristics including age, gender, race, education, region of residence, self-reported health status, dual eligibility, disability, comorbidity, and proxy assistance for those who reported these variable. Differences in proportion of diabetic beneficiaries responding to the experience of care questions, the dependent variables, are examined.

Hypothesis 1.1 states that a higher proportion of MA enrollees as compared to FFS enrollees with diabetes will be younger, male, lower educational attainment, non-Whites and living in urban areas. It is also hypothesized that a higher proportion of FFS enrollees will be disabled, dually eligible for both Medicare and Medicaid, and use proxy help to respond to the survey.

Results from the analysis of Hypothesis 1.1show:

- A higher proportion of FFS enrollees in the younger group of Medicare beneficiaries (18-64 age group) compared to MA (47.08% MA vs. 52.92% FFS),
- No statistically significant difference in enrollment by gender between FFS and MA,
- A higher proportion of MA enrollees with educational attainment of high school or less (55.96%) compared to 44.04% in FFS,
- A higher proportion of MA enrollees that are non-white 61.54% compared to FFS enrollees (38.46%),
- A higher proportion of MA enrollees that are living in urban areas (65.16%) compared to FFS enrollees (34.84%),
- A higher proportion of disabled FFS enrollees (51.5%) compared to MA (48.5%),
- A higher proportion of FFS enrollees younger than 65 are duals (55.57%) compared to MA (44.43%). For enrollees older than 65, 43.18% of duals are in FFS compared to 56.82% in MA.
- A higher proportion of MA enrollees (53.4%) reported receiving proxy help completing the questionnaire/interview than FFS enrollees (46.6%, p-value=0.01).

Results of the analysis (summarized above) are consistent with Hypothesis 1.1 with the exception that a higher proportion of MA enrollees as compared to FFS enrollees with diabetes are younger, under age 65. This does make sense given that younger Medicare beneficiaries are almost all disabled, and many are dually eligible for both Medicare and Medicaid, and are more likely to be enrolled in Fee-for-Service Medicare [Nicholas,

2009; kff.org]. Research has shown that older Americans are less familiar and less apt to use information to navigate coverage options {{692 Greenwald,L.M. 2006; 420 Uhrig,J.D. 2006;}}. Diabetes requires ongoing management and many with diabetes have one or more additional chronic conditions. One might expect they would be more likely to enroll in MA in order to have the care management and care coordination services that MA provides.

Hypothesis 1.2 states that a higher proportion of MA enrollees as compared to FFS with diabetes will report that their personal doctor explains things in a way that was easy to understand; easy to receive a test or treatment; and easy to fill a prescription. However, it is also hypothesized that a higher proportion of FFS enrollees will report more ease with getting an appointment to see a specialist as compared to MA enrollees.

Results from the analysis of Hypothesis 1.2 shows:

- Enrollees in MA are more likely to answer that their doctors "always" or "usually" explain things in a way that was easy to understand (53.54%) versus 46.46% in FFS, p-value<0.0001.
- Enrollees in MA (52.06%) are more likely to report it was easy to receive care, tests or treatments they needed than enrollees in FFS (47.94%),
- Enrollees in MA are more likely to report ease with getting an appointment with a specialist than enrollees in FFS (52.09% in MA versus 47.91% in FFS),
- Enrollees in MA-PD are statistically (p=0.137) no more likely to report ease with using Medicare Part D to get the medicines their doctor prescribed than those in FFS-PD.

Results in Hypothesis 1.2 show that enrollees in MA are more likely to indicate ease with getting an appointment with a specialist than FFS (52.1% in MA versus 47.9.% in FFS). With regards to "doctors' explanation" and "receiving care, tests, or treatment," the results again show that MA enrollees report better experiences with "doctors' explanation" (53.5%) and "receiving care, tests, or treatment," (52.1%) than FFS enrollees. These results may be explained by the fact that care models set up by MA plans (which focuses on care coordination and follow-up) may be effective in making sure beneficiaries understand their care plan (as explained by a doctor), and are better at making sure beneficiaries get the follow-up and specialty care they need to manage their condition than those in FFS. The results show that MA enrollees are statistically equally likely to report ease with using Medicare to get the medicines their doctor prescribed (MA-PD 91.1% and FFS-PD 90.7%; p= 0.137). The implementation of the Medicare Modernization Act and Part D prescription drug coverage in 2006, made it possible for enrollees in MA and FFS enrollees to have access to prescription medication In some cases, research has found MA enrollees may pay less out-of-pocket and be less likely to delay refilling or not filling prescriptions. However, MA enrollees are more likely to need to obtain prior approval to get prescriptions filled when prescribed a brand name drug as compared to FS-PD enrollees (Neuman et al. 2007).

Aim 2:

Examine the relationship of age, race, gender, education, self-reported health status, disability, proxy assistance, region of residence, as well as co-morbidities and dual eligibility and how this varies between MA and FFS, among those who have received one

or more services and responded to the patient-reported experience questions. Aim 2 has four hypotheses; each of these hypotheses will be examined below.

Hypothesis 2.1: After controlling for beneficiary socio-demographics and health characteristics, beneficiaries in MA and FFS combined who have a high school education or less will be found to have worse experience of care with regards to the four outcome variables. Comparing MA and FFS enrollees, those in MA with a high school education or less are found to have worse experience of care than those in FFS with a high school education or less with regards to the outcome variables.

Results of the analysis of Hypothesis 2.1, (summarized above) show that:

- Enrollees with more than a high school education report better experience with understanding a doctor's explanation than those with a high school education or less,
- Enrollees with more than a high school education report slightly worse experiences with "obtaining care, tests, or treatment";
- Enrollees with more than a high school education report slightly worse experience with "getting specialist appointment" than those with a high school education or less, and
- Enrollees with more than a high school education report slightly worse experiences with "obtaining prescription drugs," however, this was not statistically significant.

Consistent with what was hypothesis, Medicare enrollees (MA and FFS combined) with more than a high school education report better experience with ease of understanding a doctor's explanation than those with a high school education or less. This may reflect the likely advantage of more educated enrollees to more easily understand their doctor's explanation of treatment and the treatment of diabetes than enrollees with a high school

education or less. This may translate to higher reported scores of experience of care for those with more than a high school education.

With regards to the other three outcomes: "obtaining care, tests, or treatment," "getting specialist appointment," and "obtaining prescription drugs," results show that enrollees in the combined group of MA and FFS enrollees who have more than a high school education report a more positive experience for these outcome variables when no adjustments were made for demographic and health status variables. When demographic and health status variables are included in the models, we see that those with more than a high school education are likely to report worse experiences with getting care, treatment, or tests and with ease of making appointment with specialist. Enrollees in MA and FFS do not differ statistically in their reported experience with ease of getting prescription drugs when demographic and health variables are taken into account.

When looking at only those in MA with a high school education or less compared to those in FFS with a high school education or less, it was hypothesized that those in MA will report better experiences than those in FFS with a high school education or less. Results show that MA enrollees with a high school education or less report better experiences for "obtaining care, treatment, or tests" than those in FFS. In addition, those in MA with a high school education or less report statistically comparable experiences with "doctors' explanation" and "getting specialist appointment,' while reporting worse experiences with "obtaining prescription medication" than those in FFS with a high school education or less.

A plausible explanation for these findings may be that more educated Medicare enrollees may be more critical about the care they receive and tend to rate lower than less educated Medicare enrollees. Previous research (Landon et al. 2004; Elliott et. al 2011) has found that more highly educated beneficiaries are likely to have better access to care than their counterparts in both MA and FFS settings. More highly educated beneficiaries tend to be more negative about their experiences with care, possibly because they are more critical of or have higher expectations for the care and access to services than those with less education..

In addition, differences in reported experiences of care between, those in MA with a high school education or less and those in FFS with a high school education or less may be explained by the fact that managed care plans are incentivized to improve the bottom-line, and many health plans have adopted care models to better manage care of patient with chronic conditions like diabetes. MA plans have been found to be better at providing programs that are designed to improve patients' adherence to treatment regimens and physicians' adherence to professional guidelines. For example, strategies that have been routinely used by MA plans to enhance primary care of patient with diabetes—including home visits, care transitions, and care coordination— have been shown to be effective in reducing hospitalization and readmission rates for Medicare beneficiaries with diabetes (Cohen et al.2012). However, FFS do not provide such services. This may be one explanation why those with a high school education or less in MA report slightly better experience than those with a high school education or less in FFS.

Hypothesis 2.2: Proposes that Beneficiaries in FFS and MA with diabetes who are White will be more likely to report a positive experience with care than non-whites after controlling for socio-demographics and health characteristics.

Results of the analysis of Hypothesis 2.2 show that:

- Medicare beneficiaries who are White are more likely to report positive experiences for all the outcome variables in the analyses excluding and including demographic and health variables.

Previous research has consistently found socio-demographic factors explain significant variations in experiences of care reported by Medicare enrollees. Since Medicare enrollees who are non-white tend to have lower socio-demographic status; studies have found that Medicare beneficiaries with lower socioeconomic status (SES) were more likely to face barriers to receiving quality care (Kapur et al.2006, Elliott et al. 2011). Research on both Medicare FFS and MA plans concluded that seniors with lower SES used fewer services than those with higher SES. In particular, studies have found that Medicare beneficiaries with lower SES, unlike those with higherer SES, were less knowledgeable of the benefits of good health behaviors (e.g., not-smoking, exercise, healthy diet), and hence may have been more prone to worse outcomes (Kapur et al.2006). SES has been found to be related to the types of services utilized. For example, better educated persons have been found to prefer receiving care from specialists rather than generalists or primary care physicians (Kapur et al. 2006). Other researchers have found that minorities in managed care plans have worse health outcomes relative to Whites than do those in Medicare FFS (Bonito et al. 2004). The suggested reason has been that managed care limits freedom of choice of physician and may require prior

approval by the primary care provider acting as a gate-keeper. One study reported that gate-keeping was especially detrimental to racial and ethnic minorities who may be seeking to locate culturally appropriate providers (Bonito et al. 2004). Given that non-Whites are more likely to face barriers to care relative to Whites, it is not surprising that Whites will report better experiences of care for all the outcome variables in this study. This project highlights the need to address the care of diabetes as it relates to minorities; who in general, are more likely to report worse experiences with care than Whites and experience worse health outcomes.

Hypothesis 2.3: Medicare beneficiaries with diabetes who are 65 years and older in both MA and FFS will more frequently report a positive experience with obtaining care than those younger than 65 after controlling for socio-demographics and health characteristics. Also Medicare beneficiaries with diabetes who are 75 years and older in both MA and FFS will more frequently report a positive experience with obtaining care than those younger than 75 after controlling for socio-demographics and health characteristics.

In the analysis of Hypothesis 2.3, Medicare beneficiaries were grouped into three age groups: 18-64, 65-74, and 75 and above. The results show that:

- Enrollees that are 65 and older report better experiences for all outcome variables than enrollees who are younger than 65. The only exception is the outcome, ease of understanding doctor's explanation, where there are no significant differences by age.
- Further analysis also showed that enrollees that are 75 and older report better experiences for all outcome variables than enrollees who are younger than 75. The only

exception again is the outcome, ease of understanding doctor's explanation, where the results are not statistically significant.

Analysis of Hypothesis 2.3 shows that in general the oldest Medicare beneficiaries tend to report better experiences of care than those that are younger than 65 and those between the ages of 65-74. Those that are 65-74 tend to report better experiences of care than those that are younger than 65. Previous studies have found that elderly Medicare adults (those 65 and above) do not value having a large number of choices as highly as do younger adults and that elderly beneficiaries' knowledge of their alternative insurance options in MA is poor [McWilliams et al, 2013]. Older adults may in fact appreciate the coordination of care offered by MA and have less concern about the restrictions in provider choice associated with MA plans. This may explain why they prefer enrolment in MA over FFS. Since older Medicare beneficiaries tended to be less critical of their care, it may explain their more positive responses about experiences of care than younger Medicare beneficiaries.

Hypothesis 2.4: Beneficiaries who are females will be associated with less positive reports of experience with their overall care in both MA and FFS than males; females in FFS will report more positive experience with care than those in MA after controlling for socio-demographics and health characteristics,

The findings for Hypothesis 2.4 show that:

- In the combined MA and FFS group, no statistically significant differences in outcomes between males and females were found for doctor explanations, obtaining care, tests, or treatment, and experience with getting specialist appointment. For the outcome

variable “obtaining prescription drugs,” males are 16% less likely to report positive experiences than females.

- Females in MA report better experiences with care for the outcome variables of “doctor explanations,” “obtaining care, tests, or treatment,” and “getting specialist appointment.” Females in MA report worse experiences with care for the outcome variable “obtaining prescription drugs.”

Analysis of Hypothesis 2.4 shows no differences between males and females experiences of care, except for ease of filling prescriptions. The research literature shows gender differences inquality of care for cardiovascular disease and diabetes among Medicare enrollees as it relates to screening, treating, and outcomes for these conditions (Bird et al.2007). This study found lower quality of care for women despite the fact that women typically have higher rates of physician visits than men. A plausible explanation for females reporting better experiences of care than males in this diabetic sample may be that this group of individuals differs with regards to how they interact with the healthcare system from the general population. Since diabetes is largely a self-care chronic condition, females might be more successful in getting the resources they need to manage their condition than males.

Females in MA report better experiences of care than females in FFS and this may reflect better coordination of care for chronic conditions such as diabetes which is one attribute of MA plans. Females in MA may benefit from managed care attribute of care coordination for better managing care of patient with chronic conditions like diabetes. In 2009, the coverage model did not provide full coverage for preventive services in FFS. The fee-for-service structure of traditional Medicare pays for clinical services delivered

to the patient and not specifically for services related to educate patients about self-management skills that are so essential in the management of diabetes. It may be that managed care emphasis on care coordination may enhance female enrollees reported experiences of care.

AIM 3

Examine the relationship of age, race, gender, education, self-reported health status, region of residence, co-morbidities, dual eligibility, disability, and proxy assistance with survey on filling a prescription in the previous six months; among those who filled prescriptions, examine how the diabetic population reports experience with Part D and how this varies between MA-PD and FFS-PD.

Hypothesis 3.1 states that Medicare enrollees with diabetes who are age 65 or older are expected to be more positive with their experience in obtaining prescription medications than those younger than 65. Hypothesis 3.1also proposed that enrollees with diabetes who are age 75 or older are expected to be more positive with their experience in obtaining prescription medications than those younger than 75; after controlling for socio-demographics and health characteristics. Further, this hypothesis proposes that those enrollees in MA-PD plans are expected to be more positive than enrollees in FFS-PD after controlling for socio-demographics and health characteristics.

Results from the analysis support the hypothesis that:

- Those that are 65 and older are 33% much more likely to report positive experience with obtaining prescription medication than those that are younger than 65 (p-value=0.013),

- Those that are 75 and older are 15% more likely to also report positive experiences with obtaining prescription medication than those that are younger than 75 (p-value <0.001), and
- Those enrollees in MA-PD are 12% more likely to report positive experience with obtaining prescription medication than enrollees in FFS-PD (p-value= 0.002).

These results and previous research show that older Medicare beneficiaries tend to report better experiences of care than those that are younger than 65. Studies have found that elderly Medicare adults are not too concerned with having a large number of choices and that knowledge of their alternative insurance options, especially in MA, is poor [McWilliams et al, 2013]. Thus, older adults may just be satisfied with filling a prescription and not worry about whether the medication is brand name or generic. Since older Medicare beneficiaries may tend to be less critical of the medication they get, it may explain their response tendency to rate higher than younger Medicare beneficiaries. The analysis also supports the hypothesis that, in general, those enrollees in MA-PD are more likely to report positive experience with obtaining prescription medication than enrollees in FFS-PD. Since the implementation of the Part D prescription drug coverage in 2006, research studies have been examining the experience of beneficiaries enrolled in a Medicare prescription drug program. Research from this analysis and from previous studies show that enrollees in MA-PD plans were found to pay less out-of-pocket and to be less likely to delay refilling or not filling prescriptions; MA-PD enrollees were more likely to take advantage of the 90 day mail-order option to fill prescriptions for chronic medications than FS-PD enrollees (Neuman et al. 2007). Unlike for MA-PD enrollees where the drug benefit is attached to the medical coverage, FF-PD enrollees have to

navigate stand-alone drug plans to fill a prescription, which might be more complicated to navigate and expensive than what MA-PD enrollees may pay. It makes sense that this study will find enrollees in MA-PD plans to be more likely to report better experiences than those in FS-PD plans.

Hypothesis 3.2: Whites with diabetes in both MA-PD and FFS-PD are expected to be more likely to have filled a prescription in the previous 6 months and more satisfied with their experience in obtaining prescriptions than non-whites after controlling for all other variables. However, Whites in MA-PD will be more satisfied with their experience in obtaining prescriptions medications than those in free standing PDPs.

Results from this analysis show that:

- Whites in both MA and FFS are 75% more likely to report positive experience with obtaining prescription medication than those who are non-whites (p-value<.0001).
- Whites in MA-PD are 15% more likely to report positive experience with obtaining prescription medication than their White counterparts in FFS-PD (p-value=0.002).

Consistently in this study, results have shown that Whites report significantly more positive experiences with obtaining services than non-whites. For reasons already outlined above, Whites are like more able to access services than non-whites and more likely to be satisfied with their experiences than non-whites. Analysis on Hypothesis 3.2 supports what was proposed that Whites in both MA and FFS are more likely to report positive experience with obtaining prescription medication than those who are non-whites. In addition whites in MA-PD are more likely to report better experiences with the drug benefit than non-whites. The finding that Whites in MA-PD report better experience

with the drug benefit than Whites in FS-PD is not surprising for reasons already outlined above.

Hypothesis 3.3: Beneficiaries in MA-PD and FFS-PD with diabetes who are more educated are expected to be more satisfied with their experience in obtaining prescriptions than those who are less educated; after controlling for other variables. Results show that:

- Enrollees with more than a high school education are 10% , p-value = 0.002) more likely to report positive experience with obtaining prescription medication than those with a high school education or less when the "proxy" variable was taken out of the model but not statistically significant with the variable in the model (-2%, p-value = 0.597).

In Hypothesis 2.1, results show that enrollees with more than a high school education report slightly worse experiences with "obtaining prescription drugs," however, this was found to be not statistically significant. In the analysis of Hypothesis 3.3, the models were run with and without the proxy variable. Proxy has been found to play a confounding role on the relationship between some of the independent variables and the outcome variables (see result section and Appendix B). When the models were ran including the proxy variable, the results were consistent with results in Hypothesis 2.1, (that enrollees with more than a high school education report slightly worse experiences with "obtaining prescription drugs," however, this was found not statistically significant). When the model excluded the proxy variable, the results show that enrollees with more than a high school education are more likely to report positive experience with obtaining prescription medication than those with a high school education or less.. Clearly, there is

correlation between the proxy variable and education, when proxy was included it was not significant, but enrollees with more than a high school education were seen to report worse experience with obtaining prescription medication than those with a high school education or less. When proxy was taken out of the models, those with more than a high school education report better results with obtaining prescription medications than those with a high school or less education. This seem to point to an argument that those with more than a high school education might actually report better experiences with obtaining prescription than those with a high school education or less.

Implications to the Medicare Program

This study is the first to use Medicare Consumer Assessment of Healthcare Provider and System (MCAHPS) to compare patient experience of care in a national representative sample of diabetic Medicare patients who were enrolled in Medicare Fee-for-Service (FFS) and Medicare Advantage (MA) using the 2009 MCAHPS survey. Patient experience of care has become a central tenet through which Medicare assesses the quality of health care delivered to Medicare beneficiaries. Patient empowerment and patient reported outcomes have has become widely recognized as a compelling paradigm for improving health care by holding providers accountable for the experiences of enrollees as they navigate the healthcare system. Currently, the Centers for Medicare and Medicaid Services (CMS) has developed CAHPS surveys for a number of settings: including home health, nursing home, dialysis facilities, hospitals, and health plans and Fee-for-Service; and is moving towards developing CAHPS surveys for a number of other settings: including outpatient facilities, Hospices, and emergency departments,. All of these surveys are geared towards assessing the experiences of care of these enrollees in these settings.

One of the unique aspects to this study is that it uses a CAHPS survey to look at the experiences of care for a specific group of enrollees, the diabetics, that are enrolled in one of the two insurance options offered by Medicare. Beyond this, the study also looks at subgroups within this group of diabetics to further assess their experiences of care. Diabetes is one of the costliest (both in terms of resources and quality of life) chronic conditions in the Medicare program.

The CAHPS surveys conducted by Medicare focus on assessing experiences of care for specific settings. The primary purpose of these surveys is not to assess experiences for specific conditions or subgroups of enrollees. The value of this study is that it goes beyond looking at assessing experiences of care for beneficiaries enrolling in the two insurance options offered by Medicare. This study goes further by teasing out a very important group of enrollees (those with diabetes), and within this group, looking at how socio-demographic characteristics influences experiences of care.

This study is of value to the Medicare program because it highlights a different approach to assessing patient experiences of care – targeting specific conditions and looking at the experiences of subgroups within that condition. The current approach focusses on the care setting. The study is also of value to the Medicare program because it shows that certain groups such as, non-whites, less educated, and younger age groups are more likely to have a more negative healthcare experience than older, better educated and White Medicare beneficiaries.

According to the 2012 chartbook published by CMS to provide an overview of chronic conditions among Medicare beneficiaries, diabetes is among the top 5 most prevalent and high cost chronic conditions amongst Medicare enrollees. The others are: High blood pressure, High cholesterol, Heart disease, and Arthritis. Targeting these chronic conditions and looking at what is important to the beneficiaries with these chronic conditions might help the Medicare Program develop more effective care models that will not only improve quality of care, but also have the potential to reduce costs.

Findings from this project can be used to explore differences in models of care across the Medicare program, specifically as it relates to chronic conditions. Second, this study can

provide information to policy makers, quality improvement organizations and other stake holders about the differences in experiences of care for different subgroups with a group that share a common chronic condition like diabetes. Third, the study highlights the fact that population subgroups do experience the healthcare system in different ways. These differences in the experiences of subpopulations within the Medicare program should be considered as care models are being developed.

As additional CAHPS data are collected in the coming years, findings from this project may provide a strong argument for monitoring experiences of care for beneficiaries in specific subgroups; especially those that have historically been considered vulnerable.

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Appendices

Appendix A:
2009 MCAHPSQuestionaires

Oct 26 2008 Revisions Updated to Reflect Decisions of Nov 5 2008 (FFS Only)

OMB 0938-0732

ABOUT THIS DOCUMENT:
This document was created by exporting CMS' final PDF versions of 2008 MCAHPS surveys to Word. The export process retains wording flow, but not format or layout. Gross errors in format and layout were corrected, but format/layout of this document is not to be taken as final proposed for 2009. What is final proposed for 2009 are the wording revisions and item re-numbering indicated in "track changes."

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services 7500 Security Boulevard, Mail Stop N2-04-27 Baltimore, Maryland 21244-1850

Dear Medicare Beneficiary:

As a person with Medicare, you deserve to get the highest quality medical care when you need it, from doctors that you trust. The Centers for Medicare & Medicaid Services (CMS), is the federal agency that administers the Medicare program and our responsibility is to ensure that you get that high quality care at a reasonable price. One of the ways we can fulfill that responsibility is to find out directly from you about the care you are currently receiving under the Medicare program.

CMS is conducting a survey of people with Medicare to learn more about the care and services you receive. Your name was selected at random by CMS from among Medicare enrollees. We would greatly appreciate it if you would take the time, about 20 minutes, to fill out this questionnaire. The accuracy of the results depends on getting answers from you and other people with Medicare selected for this survey. This is your opportunity to help us serve you better.

If you changed your Medicare plan for 20082009, please answer the questions in the survey thinking about your experiences in the last six months of 20072008. All information you provide will be held in confidence and is protected by the Privacy Act. The information you provide will not be shared with anyone other than authorized persons at CMS and Wilkerson & Associates, the survey research organization assisting us in this survey. You do not have to participate in this survey. Your help is voluntary and your decision to participate or not to participate will not affect your Medicare benefits in any way. However, your knowledge and experiences will help other people with Medicare make more informed choices, so we hope you will choose to help us.

We recently mailed this same survey to you, but we haven't received it back from you. Learning about your experiences is very important to us. Your knowledge and experiences could help other people with Medicare to make more informed choices. If you have already sent the survey back, thank you for completing the survey. If you have any questions about the survey or would like to find out how to complete the survey by phone, please don't hesitate to call Chris Allen with Wilkerson & Associates toll-free at 1-866-406-1110, Monday through Friday, between 9:00 a.m. and midnight Eastern time.

Thank you for your help with this important survey.

Walter D Stone

Privacy Officer

Our records show that you are now in Medicare, the health insurance program for people 65 years old and older or persons with certain disabilities.

Please answer the questions in this survey as fully as possible regardless of whether or not you consider yourself on Medicare.

1. Some people who have Medicare also have other insurance to help pay for some of the costs of their health care. Do you have any other insurance that pays at least some of the cost of your health care?

   Yes

   No → If No, Go to Question 3

2. Please mark the box below for each type of health insurance that you have.

   Medigap, which may be identified on the front of your policy as "Medicare Supplemental Insurance"

   Employer, Union, or Retiree Health Coverage (insurance)

   Veteran's Benefits, also known as VA benefits

   Military Retiree Benefits, also known as Tricare

   Medicaid, also known as State medical assistance, which is for some persons with limited income and resources

   Any Medicare Prescription Drug Plan

   Other (Please write the name of the other health insurance you currently have on the line below.)

   I don't have health insurance other than Medicare.

These questions ask about your own health care. Do not include care you got when you stayed overnight in a hospital. Do not include the times you went for dental care visits.

YOUR HEALTH CARE IN THE LAST 6 MONTHS

3. In the last 6 months, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor's office?

Yes
No → If No, Go to Question 5

4. In the last 6 months, when you <u>needed care right away</u>, how often did you get care as soon as you thought you needed?

   Never Sometimes Usually Always

5. In the last 6 months, <u>not</u> counting the times you needed care right away, did you make any appointments for your health care at a doctor's office or clinic?

   Yes

   No → If No, Go to Question 7

6. In the last 6 months, <u>not</u> counting the times you needed care right away, how often did you get an appointment for your health care at a doctor's office or clinic as soon as you thought you needed?

   Never Sometimes Usually Always

7. In the last 6 months, <u>not</u> counting the times you went to an emergency room, how many times did you go to a doctor's office or clinic to get health care for yourself?

   None → If None, Go to Question 10

   1 2 3 4

   5 to 9

   10 or more

8. Wait time includes time spent in the waiting room and exam room. In the last 6 months, how often did you see the person you came to see within 15 minutes of your appointment time?

   Never Sometimes Usually Always

9. Using any number from 0 to 10, where0 is the worst health care possible and10 is the best health care possible, what number would you use to rate all your health care in the last 6 months?

   0 Worst health care possible
   1
   2
   3
   4
   5
   6
   7
   8
   9
   10 Best health care possible

10. In the last 6 months, did you have a health problem for which you needed special medical equipment, such as a cane, a wheelchair, oxygen equipment, or diabetic supplies and equipment?

    Yes
    No → If No, Go to Question 12

11. In the last 6 months, how often was it easy to get the medical equipment you needed through Medicare?

    Never Sometimes Usually
    Always

12. In the last 6 months, did you have any health problems that needed special therapy, such as physical, occupational, or speech therapy?

    Yes
    No → If No, Go to Question 14

13. In the last 6 months, how often was it easy to get the special therapy you needed through Medicare?

Never Sometimes Usually

Always

14. A personal doctor is the one you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

    Yes

    No → If No, Go to Question 21 on Page XX

15. In the last 6 months, how many times did you visit your personal doctor to get care for yourself?

    None → If None, Go to Question 21 on Page XX

    1 2 3 4

    5 to 9

    10 or more

16. In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?

    Never Sometimes Usually

    Always

17. In the last 6 months, how often did your personal doctor listen carefully to you?

    Never Sometimes Usually

    Always

18. In the last 6 months, how often did your personal doctor show respect for what you had to say?

    Never Sometimes Usually

    Always

19. In the last 6 months, how often did your personal doctor spend enough time with you?

Never Sometimes Usually Always

20. Using any number from 0 to 10, where0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor?

0 Worst personal doctor possible
1
2
3
4
5
6
7
8
9
10 Best personal doctor possible

Yes
No → If No, Go to Question 25

GETTING HEALTH CARE FROM SPECIALISTS

When you answer the next questions, do not include dentalvisits or care you got when you stayed overnight in a hospital.

21. Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 6 months, did you try to make any appointments to see a specialist?

22. In the last 6 months, how often was it easy to get appointments with specialists?

    Never Sometimes Usually

    Always

23. How many specialists have you seen in the last 6 months?

    None → If None, Go to Question 25

    1 specialist

    2 3 4

    5 or more specialists

24. We want to know your rating of the specialist you saw most often in the last 6 months. Using any number from 0 to 10, where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate that specialist?

0 Worst specialist possible
1
2
3
4
5
6
7
8
9
10 Best specialist possible

MEDICARE EXPERIENCE

The next questions ask about your experience with Medicare.

25. In the last 6 months, did you try to get any kind of care, tests, or treatment through Medicare?

Yes
No → If No, Go to Question 27

26. In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through Medicare?

Never Sometimes Usually
Always

27. In the last 6 months, did you try to get information or help from Medicare's customer service?

Yes

No → If No, Go to Question 30

28. In the last 6 months, how often did Medicare's customer service give you the information or help you needed?

Never Sometimes Usually

Always

29. In the last 6 months, how often did Medicare's customer service staff treat you with courtesy and respect?

Never Sometimes Usually

Always

ABOUT YOU

30. In the last 6 months, did Medicare give you any forms to fill out?

Yes

No → If No, Go to Question 32

31. In the last 6 months, how often were the forms from Medicare easy to fill out?

Never Sometimes

Usually Always

32. Using any number from 0 to 10, where0 is the worst health plan possible and10 is the best health plan possible, what number would you use to rate Medicare?

0 Worst health plan possible

1

2

3

4

5

6

7

8

9

10 Best health plan possible

33. Considering what you pay, how satisfied are you with the value of the health care you get?

Very dissatisfied

Somewhat dissatisfied

Neither dissatisfied nor satisfied Somewhat satisfied

Very satisfied

34. In general, how would you rate your overall health?

Excellent
Very good
Good
Fair
Poor

35. In general, how would you rate your overall mental health?

Excellent
Very good
Good
Fair
Poor

36. Over the last 2 weeks, how often have you been bothered by having little interest or pleasure in doing things?

Not at all
Several days
More than half the days
Nearly every day

37. Over the last 2 weeks, how often have you been bothered by feeling down, depressed, or hopeless?

Not at all
Several days
More than half the days
Nearly every day

38. In the past 12 months, have you seen a doctor or other health provider 3 or more times for the same condition or problem?

Yes

No → If No, Go to Question 3839

39. Is this a condition or problem that has lasted for at least 3 months?

Yes

No

40. Do you now need or take medicine prescribed by a doctor?

Yes

No → If No, Go to Question 4142

41. Is this to treat a condition that has lasted for at least 3 months?

Yes

No

42. How often do you take a list of all your prescribed medicines to your doctor visits?

Never Sometimes

Usually Always

I do not take any prescription

medicines.

43. In the last 6 months, how often was it easy to get the medicines your doctor prescribed?

Never
Sometimes
Usually
Always
My doctor did not prescribe any medicines for me in the last 6 months.

44. In the last 6 months, did you ever delay or not fill a prescription because you felt that you could not afford it?

Yes
No
My doctor did not prescribe any medicines for me in the last 6 months.

45. How confident are you that you can identify when it is necessary for you to get medical care?

Very confident
Confident
Somewhat confident
Not at all confident

46. Because of any impairment or health problem, do you need the help of other persons with your personal care needs, such as eating, dressing, or getting around the house?

Yes

No

47. Because of any impairment or health problem, do you need help with your routine needs, such as every day household chores, doing necessary business, shopping, or getting around for other purposes?

Yes

No

48. Do you have a physical or medical condition that seriously interferes with your independence, participation in the community, or quality of life?

Yes

No

49. Has a doctor ever told you that you had any of the following conditions?

	Yes	No
a. A heart attack	☐	⓾
b. Angina or coronary heart disease	⓾	☐
c. A stroke	☐	⓾
d. Cancer, other than skin cancer	⓾	☐

e. Emphysema, asthma or COPD (chronic obstructive pulmonary disease)

f. Any kind of diabetes or high blood sugar

50. Did you get a flu shot last year, that isHave you had a flu shot any time from since September to December 20071, 2008?

Yes

No

Don't know

51. Have you ever had a pneumonia shot? This shot is usually given only once or twice in a person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine.

Yes
No
Don't know

52. Do you now smoke cigarettes everyday, some days, or not at all?

Every day
Some days
Not at all Go to Question 5153
Don't know on Page XX

53. In the last 6 months, on how many visits were you advised to quit smoking by a doctor or other health provider?

None
At least one visit
I had no visits in the last 6 months.

54. What is your age?

18 to 24
25 to 34
35 to 44
45 to 54
55 to 64
65 to 69
70 to 74
75 to 79
80 to 84
85 or older

55. Are you male or female?

Male
Female

56. What is the highest grade or level of school that you have completed?

8th grade or less
Some high school, but did not graduate
High school graduate or GED
Some college or 2-year degree
4-year college graduate
More than 4-year college degree

57. Are you of Hispanic or Latino origin or descent?

Yes, Hispanic or Latino

No, not Hispanic or Latino

58. What is your race? Please mark one or more.

White

Black or African-American

Asian

Native Hawaiian or other Pacific Islander

American Indian or Alaska Native

59. Did someone help you complete this survey?

Yes

No → If No, Go to Question 5860

60. How did that person help you? Please mark one or more.

Read the questions to me

Wrote down the answers I gave

Answered the questions for me

Translated the questions into my language

Helped in some other way

(Please print)

61. Which of the following best describes your current living arrangement: Do you live alone?

Assisted living facility:

Yes, I live alone

Long-term care facility

No, I live with others

Personal home or apartment

Other

(Please print)

Intended to be blank

Our records show that you are now in Medicare, the health insurance program for people 65 years old and older or persons with certain disabilities.

Please answer the questions in this survey as fully as possible regardless of whether or not you consider yourself on Medicare.

1. Some people who have Medicare also have other insurance to help pay for some of the costs of their health care. Do you have any other insurance that pays at least some of the cost of your health care?

   Yes

   No → If No, Go to Question 3

2. Please mark the box below for each type of health insurance that you have.

   Medigap, which may be identified on the front of your policy as "Medicare Supplemental Insurance"

   Employer, Union, or Retiree Health Coverage (insurance)

   Veteran's Benefits, also known as VA benefits

   Military Retiree Benefits, also known as Tricare

   Medicaid, also known as State medical assistance, which is for some persons with limited income and resources

   A Medicare Prescription Drug Plan

   Other (Please write the name of the other health insurance you currently have on the line below.)
   I don't have health insurance other than Medicare.

YOUR HEALTH CARE IN THE LAST 6 MONTHS

These questions ask about your own health care. Do not include care you got when you stayed overnight in a hospital. Do not include the times you went for dental care visits.

3. In the last 6 months, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor's office?

   Yes

   No → If No, Go to Question 5

Intended to be blank

4. In the last 6 months, when you needed care right away, how often did you get care as soon as you thought you needed?

   Never Sometimes Usually Always

5. In the last 6 months, not counting the times you needed care right away, did you make any appointments for your health care at a doctor's office or clinic?

   Yes
   No → If No, Go to Question 7

6. In the last 6 months, not counting the times you needed care right away, how often did you get an appointment for your health care at a doctor's office or clinic as soon as you thought you needed?

   Never Sometimes Usually Always

7. In the last 6 months, not counting the times you went to an emergency room, how many times did you go to a doctor's office or clinic to get health care for yourself?

   None → If None, Go to Question 10 on Page XX
   1 2 3 4 5 to 9 10 or more

8. Wait time includes time spent in the waiting room and exam room. In the last 6 months, how often did you seethe person you came to see within 15 minutes of your appointment time?

   Never Sometimes Usually Always

9. Using any number from 0 to 10, where 0 is the worst health care possible and10 is the best health care possible, what number would you use to rate all your health care in the last 6 months?

   0 Worst health care possible
   1
   2
   3
   4
   5
   6
   7
   8
   9
   10 Best health care possible

10. In the last 6 months, did you have a health problem for which you needed special medical equipment, such as a cane, a wheelchair, oxygen equipment, or diabetic supplies and equipment?

Yes

No →If No, Go to Question 12

11. In the last 6 months, how often was it easy to get the medical equipment you needed through Medicare?

Never Sometimes Usually Always

12. In the last 6 months, did you have any health problems that needed special therapy, such as physical, occupational, or speech therapy?

Yes

No→ If No, Go to Question 14

13. In the last 6 months, how often was it easy to get the special therapy you needed through Medicare?

Never Sometimes Usually Always

YOUR PERSONAL DOCTOR

14. A personal doctor is the one you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

Yes

No → If No, Go to Question 21

15. In the last 6 months, how many times did you visit your personal doctor to get care for yourself?

None → If None, Go to Question 21

1 2 3 4

5 to 9

10 or more

16. In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?

Never Sometimes Usually Always

17. In the last 6 months, how often did your personal doctor listen carefully to you?

Never Sometimes Usually Always

18. In the last 6 months, how often did your personal doctor show respect for what you had to say?

Never Sometimes Usually Always

19. In the last 6 months, how often did your personal doctor spend enough time with you?

Never Sometimes
Usually Always

20. Using any number from 0 to 10,where 0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor?

0 Worst personal doctor possible
1
2
3
4
5
6
7
8
9
10 Best personal doctor possible

GETTING HEALTH CARE FROM SPECIALISTS

When you answer the next questions, do not include dental visits or care you got when you stayed overnight in a hospital.

21. Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 6 months, did you try to make any appointments to see a specialist?

Yes
No → If No, Go to Question 25

on Page XX

22. In the last 6 months, how often was it easy to get appointments with specialists?

Never Sometimes Usually
Always

23. How many specialists have you seen in the last 6 months?

None → If None, Go to Question 25
1 specialist
2 3 4
5 or more specialists

Never Sometimes Usually Always

24. We want to know your rating of the specialist you saw most often in the last 6 months. Using any number from0 to 10, where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate that specialist?

0 Worst specialist possible
1
2
3
4
5
6
7
8
9
10 Best specialist possible

MEDICARE EXPERIENCE

The next questions ask about your experience with Medicare.

25. In the last 6 months, did you try to get any kind of care, tests, or treatment through Medicare?

Yes
No → If No, Go to Question 27

26. In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through Medicare?

27. In the last 6 months, did you try to get information or help from Medicare's customer service?

    Yes

    No → If No, Go to Question 30

28. In the last 6 months, how often did Medicare's customer service give you the information or help you needed?

    Never Sometimes Usually

    Always

29. In the last 6 months, how often did Medicare's customer service staff treat you with courtesy and respect?

    Never Sometimes Usually

    Always

30. In the last 6 months, did Medicare give you any forms to fill out?

    Yes

    No → If No, Go to Question 32

31. In the last 6 months, how often were the forms from Medicare easy to fill out?

    Never Sometimes Usually

    Always

32. Using any number from 0 to 10, where0 is the worst health plan possible and10 is the best health plan possible, what number would you use to rate Medicare?

0 Worst health plan possible
1
2
3
4
5
6
7
8
9
10 Best health plan possible

33. Considering what you pay, how satisfied are you with the value of the health care you get?

Very dissatisfied
Somewhat dissatisfied
Neither dissatisfied nor satisfied Somewhat satisfied
Very satisfied

Now, we would like to ask you some questions about your prescription drug plan.

MEDICARE PRESCRIPTION DRUG PLAN EXPERIENCES

3433. Our records show that in 2007 2008 you were in the Medicare prescription drug plan called <NAME OF YOUR PLAN>. Is that right?

Yes→ If Yes, Go to Question 3635

No

34. Please write below the name of the Medicare prescription drug plan you had in 2007 2008 and complete the following questions based on the experiences you had with that plan.

35. Customer service is information you get from staff about what is covered and how to use the plan. In the last 6 months, did you try to get information or help from <NAME OF YOUR PLAN>'s customer service?

Yes

No → If No, Go to Question 3938 on Page XX

3736. In the last 6 months, how often did <NAME OF YOUR PLAN>'s customer service give you the information or help you needed?

Never

Sometimes

Usually

Always

I did not try to get information or help from my drug plan's customer service in the last 6 months.

3837. In the last 6 months, how often did <NAME OF YOUR PLAN>'s customer service staff treat you with courtesy and respect?

Never

Sometimes

Usually

Always

I did not try to get information or help from my drug plan's customer service in the last 6 months.

3938. In the last 6 months, did you try to get information from <NAME OF YOUR PLAN> about which prescription medicines were covered?

Yes

No → If No, Go to Question 4140

4039. In the last 6 months, how often did <NAME OF YOUR PLAN> give you all the information you needed about which prescription medicines were covered?

Never Sometimes Usually

Always

I did not try to get

information about

which prescription

medicines were covered in the last 6 months.

4140. In the last 6 months, did you try to get information from <NAME OF YOUR PLAN> about how much you would have to pay for your prescription medicines?

Yes

No → If No, Go to Question 4342

4241. In the last 6 months, how often did <NAME OF YOUR PLAN> give you all the information you needed about how much you would have to pay for your prescription medicine?

Never Sometimes Usually

Always

I did not try to get information about how much I would have to pay for prescription medicines in the last 6 months.

4342. In the last 6 months, how many different prescription medicines did you fill or have refilled?

None

1 to 2 medicines

3 to 5 medicines

6 or more medicines

4443. In the last 6 months, did a doctor prescribe a medicine for you that <NAME OF YOUR PLAN> did not cover?

Yes

No → If No, Go to Question 4646

4544. When this happened, did you contact or someone else contact <NAME OF YOUR PLAN> to ask them to cover the medicine your doctor prescribed?

Yes

No → If No, Go to

Question 46

All my prescribed medicines were covered.

45. When you contacted <NAME OF YOUR PLAN> about the decision not to cover a prescription medicine did they …

Please mark one or more.

- Tell you that you can file an appeal
- Offer to send you forms that you need to file an appeal
- Suggest how to resolve your complaint
- Listen to your complaint but did not help to resolve it
- Discourage you from taking action
- Do none of these things

All my prescribed medicines were covered.

4646. In the last 6 months, how often was it easy to use <NAME OF YOUR PLAN> to get the medicines your doctor prescribed?

- Never
- Sometimes
- Usually
- Always
- I did not use my drug plan to get any prescription medicines in the last 6 months.

4747. In the last 6 months, did you ever use <NAME OF YOUR PLAN> to fill a prescription at a local pharmacy?

- Yes
- No → If No, Go to Question 4949

4848. In the last 6 months, how often was it easy to use <NAME OF YOUR PLAN> to fill a prescription at a local pharmacy?

Never

Sometimes

Usually

Always

I did not use my drug plan to fill a prescription at a local pharmacy in the last 6 months.

4949. In the last 6 months, did you ever use <NAME OF YOUR PLAN> to fill any prescriptions by mail?

Yes

No → If No, Go to Question 5151

5050. In the last 6 months, how often was it easy to use <NAME OF YOUR PLAN> to fill prescriptions by mail?

Never Sometimes Usually Always

I did not use my drug plan to fill a prescription by mail in the last 6 months.

5151. Using any number from 0 to 10,where 0 is the worst prescription drug plan possible and 10 is the best prescription drug plan possible, what number would you use to rate your drug plan?

0 Worst prescription drug plan possible

1

2

3

4

5

6

7

8

9

10 Best prescription drug plan possible

5252. Would you recommend your prescription drug plan to other people like yourself?

Definitely yes

Somewhat yes

Somewhat no

Definitely no

ABOUT YOU

5353. In general, how would you rate your overall health?

Excellent
Very good
Good
Fair
Poor

5454. In general, how would you rate your overall mental health?

Excellent
Very good
Good
Fair
Poor

55. In the past 12 months, have you seen a doctor or other health provider 3 or more times for the same condition or problem?

Yes
No → If No, Go to Question 57

56. Is this a condition or problem that has lasted for at least 3 months?

Yes
No

57. Do you now need or take medicine prescribed by a doctor?

Yes
No → If No, Go to Question 60

58. Is this to treat a condition that has lasted for at least 3 months?

Yes
No

59. How often do you take a list of all your prescribed medicines to your doctor visits?

Never Sometimes Usually Always

I do not take any prescription medicines.

60. In the last 6 months, did you ever delay or not fill a prescription because you felt that you could not afford it?

Yes

No

My doctor did not prescribe any medicines for me in the last 6 months.

61. How confident are you that you can identify when it is necessary for you to get medical care?

Very confident

Confident

Somewhat confident

Not at all confident

62. Because of any impairment or health problem, do you need the help of other persons with your personal care needs, such as eating, dressing, or getting around the house?

Yes

No

63. Because of any impairment or health problem, do you need help with your routine needs, such as every day household chores, doing necessary business, shopping, or getting around for other purposes?

Yes

No

64. Do you have a physical or medical condition that seriously interferes with your independence, participation in the community, or quality of life?

Yes

No

65. Has a doctor ever told you that you had any of the following conditions?

	Yes	No
a. A heart attack		
b. Angina or coronary heart disease		
c. A stroke		
d. Cancer, other than skin cancer		

e. Emphysema, asthma or COPD (chronic obstructive pulmonary disease)
f. Any kind of diabetes or high blood sugar

66. Did you get a flu shot last year, that isHave you had a flu shot since any time from September to December 20071, 2008?

Yes

No

Don't know

67. Have you ever had a pneumonia shot? This shot is usually given only once or twice in a person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine.

Yes

No

Don't know

68. Do you now smoke cigarettes everyday, some days, or not at all?

Every day

Some days

Not at all Go to Question 70

Don't know on Page XX

69. In the last 6 months, on how many visits were you advised to quit smoking by a doctor or other health provider?

None

At least one visit

I had no visits in the last 6 months.

70. What is your age?

18 to 24
25 to 34
35 to 44
45 to 54
55 to 64
65 to 69
70 to 74
75 to 79
80 to 84
85 or older

71. Are you male or female?

Male
Female

72. What is the highest grade or level of school that you have completed?

8th grade or less
Some high school, but did not graduate High school graduate or GED
Some college or 2-year degree
4-year college graduate
More than 4-year college degree

73. Are you of Hispanic or Latino origin or descent?

Yes, Hispanic or Latino
No, not Hispanic or Latino

74. What is your race? Please mark one or more.

White
Black or African-American
Asian
Native Hawaiian or other Pacific Islander
American Indian or Alaska Native

75. Did someone help you complete this survey?

Yes
No → If No, Go to Question 77

76. How did that person help you? Please mark one or more.

Read the questions to me
Wrote down the answers I gave
Answered the questions for me
Translated the questions into my language
Helped in some other way
(Please print)

77. Which of the following best describes your current living arrangementDo you live alone?

Assisted living facilityYes, I live alone
Long-term care facilityNo, I live with others
Personal home or apartment
Other

(Please print)

Intended to be blank

Earlier in the survey you were asked to indicate whether you have any limitations in your activities. We are now going to ask a few additional questions in this area.

78. Because of a health or physical problem are you unable to do or have any difficulty doing the following activities? (Please mark one response for each activity.)

	I am unable to do this activity	Yes, I have difficulty	No, I do not have difficulty
a. Bathing			
b. Dressing			
c. Eating			
d. Getting in or out of chairs			
e. Walking			
f. Using the toilet			

79. The Medicare Program is trying to learn more about the health care or services provided to people with Medicare. May we contact you again about the health care services that you received?

Yes
No

80. Please write your daytime telephone number below.

--

Area Code

THANK YOU FOR COMPLETING THIS SURVEY.
Please return your completed survey in the postage paid envelope to:

Medicare Satisfaction Survey
PO Box 1800
Manchester, CT 06045-9989

Intended to be blank

Intended to be blank

1. Our records show that in 2007 2008 your health services were covered by <NAME OF YOUR PLAN>.

Is that right?

Yes → If Yes, Go to Question 3

No

2. Please write below the name of the health plan you had in 2007 2008 and complete the rest of the survey based on the experiences you had with that plan. (Please print)

These questions ask about your own health care. Do <u>not</u> include care you got when you stayed overnight in a hospital. Do <u>not</u> include the times you went for dental care visits.

3. In the last 6 months, did you have an illness, injury, or condition that <u>needed care right away</u> in a clinic, emergency room, or doctor's office?

Yes

No →If No, Go to Question 5

4. In the last 6 months, when you <u>needed care right away</u>, how often did you get care as soon as you thought you needed?

Never Sometimes Usually Always

5. In the last 6 months, not counting the times you needed care right away, did you make any appointments for your health care at a doctor's office or clinic?

Yes

No →If No, Go to Question 7

6. In the last 6 months, not counting the times you needed care right away, how often did you get an appointment for your health care at a doctor's office or clinic as soon as you thought you needed?

Never Sometimes

Usually Always

YOUR HEALTH CARE IN THE LAST 6 MONTHS

7. In the last 6 months, not counting the times you went to an emergency room, how many times did you go to a doctor's office or clinic to get health care for yourself?

1 2 3 4 5 to 9 10 or more

None → If None, Go to Question 10

8. Wait time includes time spent in the waiting room and exam room. In the last 6 months, how often did you seethe person you came to see within 15 minutes of your appointment time?

   Never Sometimes
   Usually Always

9. Using any number from 0 to 10, where0 is the worst health care possible and10 is the best health care possible, what number would you use to rate all your health care in the last 6 months?

   0 Worst health care possible
   1
   2
   3
   4
   5
   6
   7
   8
   9
   10 Best health care possible

10. In the last 6 months, did you have a health problem for which you needed special medical equipment, such as a cane, a wheelchair, oxygen equipment, or diabetic supplies and equipment?

    Yes

No →If No, Go to Question 12

11. In the last 6 months, how often was it easy to get the medical equipment you needed through <NAME OF YOUR PLAN>?

Never Sometimes
Usually Always

12. In the last 6 months, did you have any health problems that needed special therapy, such as physical, occupational, or speech therapy?

Yes
No →If No, Go to Question 14

13. In the last 6 months, how often was it easy to get the special therapy you needed through <NAME OF YOUR PLAN>?

Never Sometimes
Usually Always

YOUR PERSONAL DOCTOR

14. A personal doctor is the one you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

Yes → If No, Go to Question 21 on Page XX
No

15. In the last 6 months, how many times did you visit your personal doctor to get care for yourself?

None → If None, Go to Question 21

1 2 3 4 5 to 9 10 or more

16. In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?

Never Sometimes

Usually Always

17. In the last 6 months, how often did your personal doctor listen carefully to you?

Never Sometimes

Usually Always

18. In the last 6 months, how often did your personal doctor show respect for what you had to say?

Never Sometimes
Usually Always

19. In the last 6 months, how often did your personal doctor spend enough time with you?

Never Sometimes

Usually Always

20. Using any number from 0 to 10, where0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor?

0 Worst personal doctor possible
1
2
3
4
5
6
7
8
9
10 Best personal doctor possible

GETTING HEALTH CARE FROM SPECIALISTS

When you answer the next questions, do not include dental visits or care you got when you stayed overnight in a hospital.

21. Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 6 months, did you try to make any appointments to see a specialist?

Yes

No → If No, Go to Question 25

22. In the last 6 months, how often was it easy to get appointments with specialists?

Never Sometimes
Usually Always

23. How many specialists have you seen in the last 6 months?

None → If None, Go to Question 25
1 specialist
2 3 4 5 or more specialists

24. We want to know your rating of the specialist you saw most often in the last 6 months. Using any number from0 to 10, where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate that specialist?

0 Worst specialist possible
1
2
3
4
5
6
7
8
9
10 Best specialist possible

The next questions ask about your experience with <NAME OF YOUR PLAN>.

25. In the last 6 months, did you try to get any kind of care, tests, or treatment through <NAME OF YOUR PLAN>?

Yes
No →If No, Go to Question 27

26. In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through <NAME OF YOUR PLAN>?

Never Sometimes Usually Always

27. In the last 6 months, did you try to get information or help from XXXXXXXXXXXXXX XXXXXXXXXXXXXXXX's customer service?

Yes
No →If No, Go to Question 30 on Page XX

28. In the last 6 months, how often did <NAME OF YOUR PLAN>'s customer service give you the information or help you needed?

Never Sometimes Usually Always

29. In the last 6 months, how often did <NAME OF YOUR PLAN>'s customer service staff treat you with courtesy and respect?

Never Sometimes

Usually Always

30. In the last 6 months, did <NAME OF YOUR PLAN> give you any forms to fill out?

Yes

No → If No, Go to Question 32

31. In the last 6 months, how often were the forms from <NAME OF YOUR PLAN> easy to fill out?

Never Sometimes

Usually Always

32. Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan?

0 Worst health plan possible
1
2
3
4
5
6
7
8
9
10 Best health plan possible

Very dissatisfied

Somewhat dissatisfied

Neither dissatisfied nor satisfied Somewhat satisfied

Very satisfied

33. Considering what you pay, how satisfied are you with the value of the health care you get?

You have the right to file an appeal if
<NAME OF YOUR PLAN>
decides not to provide or pay for health care services or stops providing health care services.

3433. Was there ever a time when you believed you needed care or services that <NAME OF YOUR PLAN> decided not to give you?

Yes

No → If No, Go to Question 3736

3534. Have you ever asked anyone at <NAME OF YOUR PLAN> to reconsider a decision not to provide or pay for health care or services?

Yes

No

} Go to Question 3736

Don't know

3635. When you spoke to <NAME OF YOUR PLAN> about the decision not to provide care or services, did they…

Please mark one or more.

- Tell you that you can file an appeal
- Offer to send you forms that you need to file an appeal
- Suggest how to resolve your complaint
- Listen to your complaint but did not help resolve it
- Discourage you from taking action
- Do none of these things

Question 4039

YOUR PRESCRIPTION DRUG PLAN

Now, we would like to ask you some questions about the prescription drug coverage you get through <NAME OF YOUR PLAN>.

3736. Customer service is information you get from staff about what is covered and how to use the plan. In the last 6 months, did you try to get information or help from <NAME OF YOUR PLAN>'s customer service about prescription drugs?

- Yes
- No → If No, Go to

3837. In the last 6 months, how often did <NAME OF YOUR PLAN>'s customer service give you the information or help you needed about prescription drugs?

Never Sometimes Usually Always

I did not try to get information or help from my health plan's customer service in the last 6 months.

3938. In the last 6 months, how often did <NAME OF YOUR PLAN>'s customer service staff treat you with courtesy and respect when you tried to get information or help about prescription drugs?

Never

Sometimes

Usually

Always

I did not try to get information or help from my health plan's customer service in the last 6 months.

4039. In the last 6 months, did you try to get information from <NAME OF YOUR PLAN> about which prescription medicines were covered?

Yes

No → If No, Go to Question 4241

on Page XX

4140. In the last 6 months, how often did <NAME OF YOUR PLAN> give you all the information you needed about which prescription medicines were covered?

Never Sometimes

Usually Always

I did not try to get information about which prescription medicines were covered in the last 6 months.

4241. In the last 6 months, did you try to get information from <NAME OF YOUR PLAN> about how much you would have to pay for your prescription medicines?

Yes

No → If No, Go to Question 4443

4342. In the last 6 months, how often did <NAME OF YOUR PLAN> give you all the information you needed about how much you would have to pay for your prescription medicine?

Never Sometimes

Usually Always

I did not try to get information about how much I would have to pay for prescription medicines in the last 6 months.

4443. In the last 6 months, how many different prescription medicines did you fill or have refilled?

None

1 to 2 medicines

3 to 5 medicines

6 or more medicines

4544. In the last 6 months, did a doctor prescribe a medicine for you that <NAME OF YOUR PLAN> did not cover?

Yes

No → If No, Go to Question 4747

4645. When this happened, did you or someone else contact <NAME OF YOUR PLAN> to ask them to cover the medicine your doctor prescribed?

Yes

No → If No, Go to Question 47

All my prescribed medicines were covered.

46. When you contacted <NAME OF YOUR PLAN> about the decision not to cover a prescription medicine did they …

Please mark one or more.

Tell you that you can file an appeal

Offer to send you forms that you need to file an appeal

Suggest how to resolve your complaint

Listen to your complaint but did not help to resolve it

Discourage you from taking action

Do none of these things

All my prescribed medicines were covered.

4747. In the last 6 months, how often was it easy to use <NAME OF YOUR PLAN> to get the medicines your doctor prescribed?

Never Sometimes Usually Always

I did not use my health plan to get any prescription medicines in the last 6 months.

4848. In the last 6 months, did you ever use <NAME OF YOUR PLAN> to fill a prescription at a local pharmacy?

Yes

No → If No, Go to Question 5050

4949. In the last 6 months, how often was it easy to use <NAME OF YOUR PLAN> to fill a prescription at a local pharmacy?

Never

Sometimes

Usually

Always

I did not use my health plan to fill a prescription at a local pharmacy in the last 6 months.

5050. In the last 6 months, did you ever use <NAME OF YOUR PLAN> to fill any prescriptions by mail?

Yes

No → If No, Go to Question 5252

5151. In the last 6 months, how often was it easy to use <NAME OF YOUR PLAN> to fill prescriptions by mail?

Never

Sometimes

Usually

Always

I did not use my health plan to fill a prescription by mail in the last 6 months.

5252. Using any number from 0 to 10,where 0 is the worst prescription drug plan possible and 10 is the best prescription drug plan possible, what number would you use to rate <NAME OF YOUR PLAN> for coverage of prescription drugs?

0 Worst prescription drug plan possible

1
2
3
4
5
6
7
8
9

10 Best prescription drug plan possible

5353. Would you recommend <NAME OF YOUR PLAN> for coverage of prescription drugs to other people like yourself?

Definitely yes
Somewhat yes
Somewhat no
Definitely no

ABOUT YOU

5454. In general, how would you rate your overall health?

Excellent
Very good
Good
Fair
Poor

5555. In general, how would you rate your overall mental health?

Excellent
Very good
Good
Fair
Poor

56. In the past 12 months, have you seen a doctor or other health provider 3 or more times for the same condition or problem?

Yes
No → If No, Go to Question 58

57. Is this a condition or problem that has lasted for at least 3 months?

Yes
No

58. Do you now need or take medicine prescribed by a doctor?

Yes
No → If No, Go to Question 61

59. Is this to treat a condition that has lasted for at least 3 months?

Yes

No

60. How often do you take a list of all your prescribed medicines to your doctor visits?

Never Sometimes

Usually Always

I do not take any prescription medicines.

61. In the last 6 months, did you ever delay or not fill a prescription because you felt that you could not afford it?

Yes

No

My doctor did not prescribe any medicines for me in the last 6 months.

62. How confident are you that you can identify when it is necessary for you to get medical care?

Very confident
Confident
Somewhat confident
Not at all confident

63. Because of any impairment or health problem, do you need the help of other persons with your personal care needs, such as eating, dressing, or getting around the house?

Yes

No

64. Because of any impairment or health problem, do you need help with your routine needs, such as every day household chores, doing necessary business, shopping, or getting around for other purposes?

Yes

No

65. Do you have a physical or medical condition that seriously interferes with your independence, participation in the community, or quality of life?

Yes

No

66. Has a doctor ever told you that you had any of the following conditions?

	Yes	No
a. A heart attack		
b. Angina or coronary heart disease		
c. A stroke		
d. Cancer, other than skin cancer		
e. Emphysema, asthma or COPD (chronic obstructive pulmonary disease)		
f. Any kind of diabetes or high blood sugar		

67. Did you get a flu shot last year, that is anytime fromHave you had a flu shot since September to December 20071, 2008?

Yes

No

Don't know} Go to Question 69

68. Did you get that flu shot either through <NAME OF YOUR PLAN> or from your personal doctor?

Yes

No

Don't know

69. Have you ever had a pneumonia shot? This shot is usually given only once or twice in a person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine.

Yes

No

Don't know

70. Do you now smoke cigarettes everyday, some days, or not at all?

Every day

Some days

Not at all

}

Don't know Go to Question 72 on Page XX

71. In the last 6 months, on how many visits were you advised to quit smoking by a doctor or other health provider?

None

At least one visit

I had no visits in the last 6 months.

72. What is your age?

18 to 24

25 to 34

35 to 44

45 to 54

55 to 64

65 to 69

70 to 74

75 to 79

80 to 84

85 or older

73. Are you male or female?

Male Female

74. What is the highest grade or level of school that you have completed?

8th grade or less

Some high school, but did not graduate

High school graduate or GED

Some college or 2-year degree

4-year college graduate

More than 4-year college degree

75. Are you of Hispanic or Latino origin or descent?

Yes, Hispanic or Latino

No, not Hispanic or Latino

76. What is your race? Please mark one or more.

White
Black or African-American
Asian
Native Hawaiian or other Pacific Islander
American Indian or Alaska Native

77. Did someone help you complete this survey?

Yes
No → If No, Go to Question 79

78. How did that person help you? Please mark one or more.

Read the questions to me
Wrote down the answers I gave Answered the questions for me Translated the questions into my language
Helped in some other way
(Please print)

79. Which of the following best describes your current living arrangementDo you live alone?

Assisted living facilityYes, I live alone
Long-term care facilityNo, I live with others
Personal home or apartment
Other
(Please print)

Earlier in the survey you were asked to indicate whether you have any limitations in your activities. We are now going to ask a few additional questions in this area.

Intended to be blank

80. Because of a health or physical problem are you unable to do or have any difficulty doing the following activities? (Please mark one response for each activity.)

	I am unable to do this activity	Yes, I have difficulty	No, I do not have difficulty
a. Bathing			
b. Dressing			
c. Eating			
d. Getting in or out of chairs			
e. Walking			
f. Using the toilet			

81. The Medicare Program is trying to learn more about the health care or services provided to people with Medicare. May we contact you again about the health care services that you received?

Yes

No

82. Please write your daytime telephone number below.

--

Area Code

THANK YOU FOR COMPLETING THIS SURVEY.
Please return your completed survey in the postage paid envelope to:

Medicare Satisfaction Survey
PO Box 1800 Manchester, CT 06045-9989

Oct 26 2008 Revisions (MA Only)

Intended to be blank

Intended to be blank

1. Our records show tat in 2007 2008 your health services were covered by <NAME OF YOUR PLAN>.

   Is that right?

   Yes→ If Yes, Go to Question 3

   No

2. Please write below the name of the health plan you had in 2007 2008 and complete the rest of the survey based on the experiences you had with that plan. (Please print)

These questions ask about your own health care. Do not include care you got when you stayed overnight in a hospital. Do not include the times you went for dental care visits.

3. In the last 6 months, did you have an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor's office?

   Yes

   No → If No, Go to Question 5

4. In the last 6 months, when you needed care right away, how often did you get care as soon as you thought you needed?

   Never Sometimes Usually Always

5. In the last 6 months, <u>not</u> counting the times you needed care right away, did you make any appointments for your health care at a doctor's office or clinic?

   Yes

   No → If No, Go to Question 7

6. In the last 6 months, <u>not</u> counting the times you needed care right away, how often did you get an appointment for your health care at a doctor's office or clinic as soon as you thought you needed?

YOUR HEALTH CARE IN THE LAST 6 MONTHS

Never Sometimes
Usually Always

7. In the last 6 months, not counting the times you went to an emergency room, how many times did you go to a doctor's office or clinic to get health care for yourself?

None → If None, Go to Question 10

1 2 3 4 5 to 9 10 or more

8. Wait time includes time spent in the waiting room and exam room. In the last 6 months, how often did you seethe person you came to see within 15 minutes of your appointment time?

Never Sometimes Usually Always

9. Using any number from 0 to 10, where0 is the worst health care possible and10 is the best health care possible, what number would you use to rate all your health care in the last 6 months?

0 Worst health care possible
1
2
3
4
5
6
7
8
9
10 Best health care possible

10. In the last 6 months, did you have a health problem for which you needed special medical equipment, such as a cane, a wheelchair, oxygen equipment, or diabetic supplies and equipment?

Yes

No →If No, Go to Question 12 on Page XX

11. In the last 6 months, how often was it easy to get the medical equipment you needed through <NAME OF YOUR PLAN>?

Never Sometimes Usually Always

12. In the last 6 months, did you have any health problems that needed special therapy, such as physical, occupational, or speech therapy?

Yes

No →If No, Go to Question 14

13. In the last 6 months, how often was it easy to get the special therapy you needed through <NAME OF YOUR PLAN>?

Never Sometimes

Usually Always

YOUR PERSONAL DOCTOR

14. A personal doctor is the one you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

Yes

No → If No, Go to Question 21

15. In the last 6 months, how many times did you visit your personal doctor to get care for yourself?

None → If None, Go to Question 21

1 2 3 4 5 to 9 10 or more

16. In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?

Never Sometimes Usually

Always

17. In the last 6 months, how often did your personal doctor listen carefully to you?

Never Sometimes
Usually Always

GETTING HEALTH CARE FROM SPECIALISTS

18. In the last 6 months, how often did your personal doctor show respect for what you had to say?

    Never Sometimes
    Usually Always

19. In the last 6 months, how often did your personal doctor spend enough time with you?

    Never Sometimes
    Usually Always

20. Using any number from 0 to 10, where0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor?

    0 Worst personal doctor possible
    1
    2
    3
    4
    5
    6
    7
    8
    9
    10 Best personal doctor possible

When you answer the next questions, do <u>not</u> include dental visits or care you got when you stayed overnight in a hospital.

21. Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. In the last 6 months, did you try to make any appointments to see a specialist?

    Yes
    No → If No, Go to Question 25 on Page XX

22. In the last 6 months, how often was it easy to get appointments with specialists?

    Never Sometimes Usually Always

23. How many specialists have you seen in the last 6 months?

    None → If None, Go to Question 25 on Page XX
    1 specialist
    2 3 4 5 or more specialists

24. We want to know your rating of the specialist you saw most often in the last 6 months. Using any number from 0 to 10, where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate that specialist?

0 Worst specialist possible
1
2
3
4
5
6
7
8
9
10 Best specialist possible

YOUR HEALTH PLAN

The next questions ask about your experience with <NAME OF YOUR PLAN>.

25. In the last 6 months, did you try to get any kind of care, tests, or treatment through <NAME OF YOUR PLAN>?

Yes
No → If No, Go to Question 27

26. In the last 6 months, how often was it easy to get the care, tests or treatment you thought you needed through <NAME OF YOUR PLAN>?

Never Sometimes Usually Always

27. In the last 6 months, did you try to get information or help from <NAME OF YOUR PLAN>'s customer service?

Yes
No → If No, Go to Question 30

28. In the last 6 months, how often did <NAME OF YOUR PLAN>'s customer service give you the information or help you needed?

Never Sometimes Usually Always

29. In the last 6 months, how often did <NAME OF YOUR PLAN>'s customer service staff treat you with courtesy and respect?

Never Sometimes
Usually Always

30. In the last 6 months, did <NAME OF YOUR PLAN> give you any forms to fill out?

Yes
No → If No, Go to Question 32

31. In the last 6 months, how often were the forms from <NAME OF YOUR PLAN> easy to fill out?

Never Sometimes
Usually Always

32. Using any number from 0 to 10, where0 is the worst health plan possible and10 is the best health plan possible, what number would you use to rate your health plan?

0 Worst health plan possible
1
2
3
4
5
6
7
8
9
10 Best health plan possible

33. Considering what you pay, how

satisfied are you with the value of the

health care you get?

Very dissatisfied
Somewhat dissatisfied
Neither dissatisfied nor satisfied Somewhat satisfied
Very satisfied

You have the right to file an appeal if <NAME OF YOUR PLAN> decides not to provide or pay for health care services or stops providing health care services.

3433. Was there ever a time when you believed you needed care or services that <NAME OF YOUR PLAN> decided not to give you?

Yes

No → If No, Go to Question 3736

3534. Have you ever asked anyone at <NAME OF YOUR PLAN> to reconsider a decision not to provide or pay for health care or services?

Yes

No → Go to Question 3736

Don't know

3635. When you spoke to <NAME OF YOUR PLAN> about the decision not to provide care or services, did they…

Please mark one or more.

Tell you that you can file an appeal

Offer to send you forms that you need to file an appeal

Suggest how to resolve your complaint

Listen to your complaint but did not help resolve it

Discourage you from taking action

Do none of these things

3736. In general, how would you rate your overall health?

Excellent
Very good
Good
Fair
Poor

3837. In general, how would you rate your overall mental health?

Excellent
Very good
Good
Fair
Poor

38. Over the last 2 weeks, how often have you been bothered by feeling down, depressed or hopeless?

Not at all
Several days
More than half the days
Nearly every day

39. In the past 12 months, have you seen a doctor or other health provider 3 or more times for the same condition or problem?

Yes
No → If No, Go to Question 41

40. Is this a condition or problem that has lasted for at least 3 months?

Yes
No

41. Do you now need or take medicine prescribed by a doctor?

Yes
No → If No, Go to Question 44

42. Is this to treat a condition that has lasted for at least 3 months?

Yes
No

43. How often do you take a list of all your prescribed medicines to your doctor visits?

Never Sometimes
Usually Always
I do not take any prescription
medicines.

44. In the last 6 months, how often was it easy to get the medicines your doctor prescribed?

Never
Sometimes
Usually
Always
My doctor did not prescribe any medicines for me in the last 6 months.

4445. In the last 6 months, did you ever

delay or not fill a prescription because you felt that you could
not afford it?

Yes
No
My doctor did not prescribe any medicines for me in the last 6 months.

4546. How confident are you that you can identify when it is necessary for you to get medical care?

- Very confident
- Confident
- Somewhat confident
- Not at all confident

4647. Because of any impairment or health problem, do you <u>need the help</u> of other persons <u>with your personal care needs</u>, such as eating, dressing, or getting around the house?

- Yes
- No

4748. Because of any impairment or health problem, do you <u>need help with your routine needs</u>, such as every day household chores, doing necessary business, shopping, or getting around for other purposes?

- Yes
- No

4849. Do you have a physical or medical condition that seriously <u>interferes with your independence</u>, participation in the community, or quality of life?

- Yes
- No

		Yes	No
a.	A heart attack	☐	⓾
b.	Angina or coronary heart disease	☐	⓾
c.	A stroke	☐	⓾
d.	Cancer, <u>other than skin cancer</u>	☐	⓾

4950. Has a doctor ever told you that you had any of the following conditions?

e. Emphysema, asthma or COPD (chronic obstructive pulmonary disease)
f. Any kind of diabetes or high blood sugar

5051. Did you get a flu shot last year, that isHave you had a flu shot since
any time from September to December1, 2008?
2007?

Yes

No Go to Question 5253

Don't know

Inten
ded to be
blank

5152. Did you get that flu shot either through <NAME OF YOUR PLAN> or from your personal doctor?

Yes
No
Don't know

5253. Have you ever had a pneumonia shot? This shot is usually given only once or twice in a person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine.

Yes
No
Don't know

5354. Do you now smoke cigarettes everyday, some days, or not at all?

Every day
Some days
Not at all }
Don't know Go to Question 5556

5455. In the last 6 months, on how many visits were you <u>advised to quit</u> smoking by a doctor or other health provider?

None
At least one visit

I had no visits in the last 6 months.

5556. What is your age?

18 to 24
25 to 34
35 to 44
45 to 54
55 to 64
65 to 69
70 to 74
75 to 79
80 to 84
85 or older

5657. Are you male or female?

Male
Female

5758. What is the highest grade or level of school that you have completed?

8th grade or less
Some high school, but did not graduate
High school graduate or GED
Some college or 2-year degree
4-year college graduate
More than 4-year college degree

5859. Are you of Hispanic or Latino origin or descent?

Yes, Hispanic or Latino
No, not Hispanic or Latino

5960. What is your race? Please mark one or more.

White
Black or African-American
Asian
Native Hawaiian or other Pacific Islander
American Indian or Alaska Native

6061. Did someone help you complete this survey?

Yes
No → If No, Go to Question 62 63

6162. How did that person help you? Please mark one or more.

Read the questions to me
Wrote down the answers I gave Answered the questions for me Translated the questions into my language
Helped in some other way (Please print)

6263. Which of the following best describes your current living arrangementDo you live alone?

Assisted living facilityYes, I live alone
Long-term care facilityNo, I live with others
Personal home or apartment
Other

(Please print)

Earlier in the survey you were asked to indicate whether you have any limitations in your activities. We are now going to ask a few additional questions in this area.

Intended to be blank

6364. Because of a health or physical problem are you unable to do or have any difficulty doing the following activities? (Please mark one response for each activity.)

	I am unable to do this activity	Yes, I have difficulty	No, I do not have difficulty
a. Bathing			
b. Dressing			
c. Eating			
d. Getting in or out of chairs			
e. Walking			
f. Using the toilet			

6465. The Medicare Program is trying to learn more about the health care or services provided to people with Medicare. May we contact you again about the health care services that you received?

Yes

No

6566. Please write your daytime telephone number below.

--

Area Code

THANK YOU FOR COMPLETING THIS SURVEY.
Please return your completed survey in the postage paid envelope to:

Medicare Satisfaction Survey
PO Box 1800
Manchester, CT 06045-9989

Appendix B: Additional Proxy Analyses

In the course of my analysis, proxy was observed to have a confounding effect on most of the outcome variables. The tables below show how enrollees answered the proxy question (whether or not they received help completing the survey) for each outcome variable, as well as the demographic and health variables.

Table 1.1 shows a general distribution of how all enrollees (MA and FFS) answered the "proxy" question and each of the outcome variables. We see from Table 1.1 that out of the

dataset of 98,726, 14,624 enrollees answered "yes" to receiving proxy help, 57,124 answered "No" to receiving proxy help, and 26,978 did not answer this question (missing).

Understanding Doctors Explanation

For the dependent variable reflecting doctor's explanation, 14,624 enrollees (second column) answered "yes" to having received proxy help. Out of the 14,624 enrollees who indicated that they received proxy help, 11,590 of these enrollees reported "always/usually" (better experience) for understanding the doctor's explanation, 1,048 reported "never/sometimes" for understanding the doctor's explanation (worse experience), and 1,986 did not answer this question.

Of the 57,124 enrollees that answered "No" to receiving help completing the survey, we see that 45,883 of these enrollees reported "always/usually" (better experience) for

understanding doctor's explanation, 2,252 enrollees reported never/sometimes (worse experience) for understanding doctors explanation, and 8,989 enrollees did not answer.

Of the 26,978 who did not report whether they received help completing the survey (missing), we see that 19,370 of these enrollees reported "always/usually" (better experience) for understanding doctor's explanation, 1,917 reported "never/sometimes" (worse experience) for understanding doctor's explanation, and 5,691enrollees did not answer the proxy question nor the outcome understanding doctor's explanation.

Obtaining Care, Tests, or Treatments

For the dependent variable" Obtaining Care, Tests, or Treatments", we see that 14,624 enrollees (second column) answered "yes" to having received proxy help. Out of the 14,624 enrollees who indicated that they received proxy help, 8,158 of these enrollees reported "always/usually" (better experience) for "Obtaining Care, Tests, or Treatments", 846 enrollees reported "never/sometimes" for Obtaining Care, Tests, or Treatments (worse experience), and 5,620 did not answer this question.

Of the 57,124 enrollees who answered "No" to receiving help completing the survey, 32,490 of these enrollees reported "always/usually" (better experience) for Obtaining Care, Tests, or Treatments, 2,353 enrollees reported "never/sometimes" (worse experience) for Obtaining Care, Tests, or Treatments, and 22,281 enrollees did not answer.

Of the 26,978 who did not report whether they received help completing the survey (missing), 10,653 of these enrollees reported "always/usually" (better experience) for Obtaining Care, Tests, or Treatments, 1,592 reported "never/sometimes" (worse

experience) for Obtaining Care, Tests, or Treatments, and 14,733 enrollees did not answer the proxy question nor the outcome Obtaining Care, Tests, or Treatments.

Obtaining Specialist Appointments

For the dependent variable" Obtaining Specialist Appointments", we see that 14,624 enrollees (second column) answered "yes" to having received proxy help. Out of the 14,624 enrollees who indicated that they received proxy help, 7,243 of these enrollees reported "always/usually" (better experience) for "Obtaining Specialist Appointments", 953 enrollees reported "never/sometimes" for Obtaining Specialist Appointments (worse experience), and 6,428 did not answer this question.

Of the 57,124 enrollees who answered "No" to receiving help completing the survey, 28,809 of these enrollees reported "always/usually" (better experience) for Obtaining Specialist Appointments, 2,753 enrollees reported "never/sometimes" (worse experience) for Obtaining Specialist Appointments, and 25,562 enrollees did not answer.

Of the 26,978 who did not report whether they received help completing the survey (missing), we see that 10,021 of these enrollees reported "always/usually" (better experience) for Obtaining Specialist Appointments, 1,736 reported "never/sometimes" (worse experience) for Obtaining Specialist Appointments, and 15,221 enrollees did not answer the proxy question nor the outcome Obtaining Specialist Appointments.

Obtaining Prescription Medication

For the dependent variable" Obtaining Prescription Medication", 14,624 enrollees (second column) answered "yes" to having received proxy help. Out of the 14,624 enrollees who indicated that they received proxy help, 10,428 of these enrollees reported

	Proxy Help?

"always/usually" (better experience) for "Obtaining Prescription Medication", 1,026 enrollees reported

"never/sometimes" for Obtaining Prescription Medication (worse experience), and 3,170 did not answer this question.

Of the 37,322 enrollees who answered "No" to receiving help completing the survey, 28,809 of these enrollees reported "always/usually" (better experience) for Obtaining Prescription Medication, 2,735 enrollees reported "never/sometimes" (worse experience) for Obtaining Prescription Medication, and 17,067 enrollees did not answer.

Of the 26,978 who did not report whether they received help completing the survey (missing), we see that 16,215 of these enrollees reported "always/usually" (better experience) for Obtaining

Prescription Medication, 2,616 reported "never/sometimes" (worse experience) for Obtaining Prescription Medication, and 8,147 enrollees did not answer the proxy question nor the outcome Obtaining Prescription Medication.

Table 1.1: Distribution of enrollees who answered (Yes or No) and did not answer proxy help (Missing) for each of the outcome variables

	Proxy Help?		
	Yes	No	Missing
Understanding Doctors Explanation			
Always/Usually	11,590	45,883	19,370
Never/Sometimes	1,048	2,252	1,917
Missing	1,986	8,989	5,691
Total	14,624	57,124	26,978
Obtaining Care, Tests, or Treatments			
Always/Usually	8,158	32,490	10,653
Never/Sometimes	846	2,353	1,592
Missing	5,620	22,281	14,733
Total	14,624	57,124	26,978
Obtaining Specialist Appointments			
Always/Usually	7,243	28,809	10,021
Never/Sometimes	953	2,753	1,736
Missing	6,428	25,562	15,221
Total	14,624	57,124	26,978
Obtaining Prescription Medication			
Always/Usually	10,428	37,322	16,215
Never/Sometimes	1,026	2,735	2,616
Missing	3,170	17,067	8,147
Total	14,624	57,124	26,978

Understanding Doctor's Explanation

For the outcome "Understanding Doctor's Explanation," we see that a total of 82,060 enrollees (out of the 98,726) answered this outcome question. Of the 82,060 who answered, we see that 60,773 enrollees answered either a "yes" or "no" to the proxy help question (57,473 + 3,300) and 21,287(19,370 + 1,917) did not answer the proxy question.

We can see that enrollees who answered proxy help are more likely to report better experiences "always/usually" with ease of understanding doctor's explanation (94.57%) than those who didn't answer proxy help (90.99%).

Obtaining Care, Tests, or Treatments

For the outcome "Obtaining Care, Tests, or Treatments," we see that a total of 56,092 enrollees (out of the 98,726) answered this outcome question. Of the 56,092 who answered, we see that 43,847 enrollees answered either a "yes" or "no" to the proxy help question (40,648 + 3,199) and 12,245(1,592+ + 10,653) did not answer the proxy question.

We can see that enrollees who answered proxy help are less likely to report better experiences "always/usually" with ease of obtaining care, tests, or treatments (92.70%) than those who didn't answer proxy help (93.00%).

Obtaining Specialist Appointments

For the outcome "Obtaining Specialist Appointments," we see that a total of 51,515 enrollees (out of the 98,726) answered this outcome question. Of the 51,515 who answered, we see that 39,758 enrollees answered either a "yes" or "no" to the proxy help question (36,052 + 3,706) and 11,757(10,021+ 1,736) did not answer the proxy question.

We can see that enrollees who answered proxy help are more likely to report better experiences "always/usually" with ease of obtaining specialist appointments (90.68%) than those who didn't answer proxy help (85.23%).

Obtaining Prescription Medication

For the outcome "Obtaining Prescription Medication," we see that a total of 70,342 enrollees (out of the 98,726) answered this outcome question. Of the 70,342 who answered, we see that 51,511 enrollees answered either a "yes" or "no" to the proxy help question (47,750 + 3,761) and 18,831(16,215+2,616) did not answer the proxy question.

We can see that enrollees who answered proxy help are more likely to report better experiences "always/usually" with ease of obtaining prescription medication (92.70%) than those who didn't answer proxy help (86.11%).

Age

Enrollees who answered the proxy question are more likely to be older. Older enrollees are also more likely to report "yes" to receiving proxy help than younger enrollees (84.95% vs 15.05%).

Race

Enrollees who answered the proxy question are more likely to be whites than non-whites (78.11% vs 21.89%). Also, more non-whites answered that they received proxy (33.51%) help than not receiving proxy help (18.91%).

Gender

People who answered proxy are less likely to be males than those who failed to answer proxy (55.17% vs 57.87%.

Education

Enrollees who have a high school education or less are more likely not to answer the proxy help question than those who have more than a high school education (69.93%

30.07%). Also, those who have a high school education or less are more likely to report receiving help completing the survey than those who have more than a high school education (84.38% vs 15.62%).

GHS

Those who report fair and poor health status are more likely to report having received proxy help than those who report their health as good, very good, or excellent (60.99% vs 39.01%).

Comorbidities

Those who report one or more comorbidity are more likely to not answer the proxy help question than those who report just having diabetes (58.72% vs 41.28%).

Rural Code

Enrollees who answered "yes" to having received proxy help are more likely to be in urban areas (37.55%) than rural (35.64%) and suburban areas (26.82%).

Table 1.2: Distribution of enrollees who answered (Yes or NO) and did not answer proxy help (Missing) for each of the outcome variables and demographic characteristics

	Answered Proxy	Yes	No	Didn't Answer Proxy	P-value
Doctor's Expalnation					<0.001
Always/Usually	57473, 94.57%	11590, 91.71%	45883, 95.32%	19370, 90.99%	
Never/Sometimes	3300, 5.43%	1048, 8.29%	2252, 4.68%	1917 , 9.01%	

Obtaining care, tests, or treatment					<0.001
Always/Usually	40648, 92.70%	8158, 90.60%	32490, 93.25%	1592, 93.00%	
Never/Sometimes	3199, 7.30%	846, 9.40%	2353, 6.75%	10653, 7.00%	
Getting specialist appointment					<0.001
Always/Usually	36052, 90.68%	7243, 88.37%	28809, 91.28%	10021 , 85.23%	
Never/Sometimes	3706, 9.32%	953, 11.63%	2753, 8.72%	1736, 14.77%	
Obtaining prescription medications					<0.001
Always/Usually	47750, 92.70%	10428,91.04%	37322, 93.17%	16215, 86.11%	
Never/Sometimes	3761, 7.30%	1026, 8.96%	2735, 6.83%	2616 , 13.89%	<0.0001
Age 3-group					<0.001
18-64	10738, 15.08%	2182, 15.05%	8556, 15.08%	4919, 19.75%	
65-74	32704, 45.92%	4832, 33.33%	27872, 49.14%	11342, 45.54%	
75 and Older	27778, 39.00%	7484, 51.62%	20294, 35.78%	8644, 34.71%	
Race					<0.001
White	56045, 78.11%	9724, 66.49%	46321, 81.09%	18888, 70.01%	
Non White	15703, 21.89%	4900, 33.51%	10803, 18.91%	8090, 29.99%	
Gender					<0.001
Females	31932, 44.83%	7780, 53.20%	31782, 55.64%	10017, 42.13%	
Males	39305, 55.17%	6844, 46.80%	25342, 44.36%	13761, 57.87%	
Education					<0.001
High school or Less	44606, 62.97%	12018, 84.38%	32588, 57.58%	15734, 69.93%	
Some College	15812,	1380, 9.69%	14432,	4290,	

	22.32%		25.50%	19.07%	
4 Year Degree	4799, 6.77%	440, 3.09%	4359, 7.70%	1207, 5.36%	
More than 4 Year	5620, 7.93%	404, 2.84%	5216, 9.22%	1269, 5.64%	
GHS					<0.001
Excellent	2065 2.92%	366, 2.54%	1699, 3.02%	1382, 5.22%	
Very Good	11013, 15.57%	1070, 7.42%	9943, 17.66%	3845, 14.53%	
Good	26932, 38.08%	4189, 29.05%	22743, 40.39%	8464, 31.98%	
Fair	23652, 33.44%	6107, 42.35%	17545, 31.16%	8959, 33.85%	
Poor	7063, 9.99%	2687, 18.64%	4376, 7.77%	3819, 14.43%	
Comorbidities					<0.001
0	21498, 29.96%	4059, 27.76%	17439, 30.53%	11136, 41.28%	
1	13320, 18.56%	3038, 20.77%	10282, 18.00%	6917, 25.64%	
2	6926, 9.65%	1841, 12.59%	5085, 8.90%	3690, 13.68%	
3 or More	30004, 41.82%	5686, 38.88%	24318, 42.57%	5235, 19.40%	
Dual Status					<0.001
Yes	16017, 22.32%	5449, 37.26%	10568, 18.50%	7133, 26.44%	
No	55731, 77.68%	9175,62.74%	46556, 81.50%	19845, 73.56%	
Disabled					<0.001
Yes	12089, 16.85%	2456, 16.82%	9633, 16.89%	5634, 20.88%	
No	59561, 83.01%	12144, 83.18%	47417, 83.11%	21256, 78.79%	
Rural Code					
Rural	25675, 35.84%	5204, 35.64%	20471, 35.90%	9510, 35.31%	<0.001
Suburban	21321, 29.76%	3916, 26.82%	17405, 30.52%	7768, 28.84%	
Urban	24637, 34.39%	5483, 37.55%	19154, 33.59%	9655, 35.85%	

Analysis Looking at the Relationship between Proxy, Dual Status and Disability

Dual Status

The analysis above explores whether those who answered "yes" to receiving proxy help are more likely to be dual status. The table shows the distribution of enrollees' answers to proxy help. In the data set, 14,624 enrollees answered "yes" to receiving proxy help, 57,124 answered "No" to receiving proxy help, and 26,978 did not answer this question (missing). Of the 14,624 (out of the total dataset of 98, 726) enrollees or 14.81% who answered that they had proxy help, 5,449 are dual status (37.26%).

When we compare to those who did not have proxy help (n=57,124, 57.86%) only 10,568 out of the 57,124 (18.50%) are dual status. Based on these results, we can conclude that those who answered yes to proxy help are more likely to be dual status than those who answered no (37.26% vs 18.50%).

Disability

The analysis above explores whether those who answered "yes" to receiving proxy help are more likely to be disabled. The table shows the distribution of enrollees' answers to proxy help. In the data set, 14,624 enrollees answered "yes" to receiving proxy help, 57,124 answered "No" to receiving proxy help, and 26,978 did not answer this question (missing). Of the 26,978 (out of my total dataset of 98, 726) enrollees or 27.33% who did not answer the proxy help question, 5,634 are disabled (20.88%).

When we compare to those who answered the proxy help question (n=14,624 +57,124=71,650), 12,089 or 16.85% are disabled. Based on these results, we can conclude that those who did not answer the proxy help question are more likely to be disabled than those who answered no (20.88% vs 16.85%).

Appendix C:
Summary Tables on Confounding

Summary Tables of Hypothesis 2.1

Table 1.1: Hypothesis 2.1: Adjusted Odds Ratio of Ease of Outcome by Education (Enrollees with more than HS education versus enrollees with HS education or less)

	Odds Ratio for Ease of Outcome in >HS versus ≤ HS			
	Outcome			
Covariate(s)	Doctor explanations	Obtaining care, tests, or treatment	Getting specialist appointment	Obtaining prescription drugs
Unadjusted	1.55	1.07	1.09	1.20
Adjusted For:				
Gender	1.54	1.06	1.07 confounder	1.22
Race	1.49	1.01 NS confounder	1.05 NS confounder	1.13 confounder
Age	1.54	1.08	1.09	1.22
General Health Status	1.45	.99 NS confounder	1.01 NS confounder	1.12 confounder
Comorbidities	1.55	1.08	1.09	1.20
Proxy	1.28 confounder	.91 confounder	.97 NS confounder	1.05 NS confounder
Dual Status	1.42 confounder	.97 confounder	.99 NS confounder	1.13 confounder
Disability	1.55	1.07	1.08	1.21
Rural	1.57	1.10 confounder	1.11 confounder	1.22
Fully Adjusted Model	1.18	.85	.89	.98 NS

Table 1.2: Hypothesis 2.1: Adjusted Odds Ratio of Ease of Outcome by Insurance Type (MA vs. FFS) Among Enrollees with HS or Less Education.

	OR for Ease of Outcome in MA versus FFS			
Covariate(s)	Doctor explanations	Obtaining care, tests, or treatment	Getting specialist appointment	Obtaining prescription drugs
Unadjusted:	1.11	1.38	1.18	1.00
Adjusted For:				

Race	1.06 Confounder	1.31	1.12 Confounder	0.95 NS Confounder
Gender	1.11	1.38	1.18	1.00 NS
Education	1.11	1.38	1.18	1.00 NS
Age	1.13 Confounder	1.45	1.20	1.03 NS Confounder
General Health Status	1.16 Confounder	1.46 Confounder	1.22 Confounder	1.05 NS Confounder
Comorbidities	1.11	1.37	1.17	1.00 NS
Proxy	1.07 NS Confounder	1.35	1.15	0.92 Confounder
Dual Status	1.13 Confounder	1.43	1.21 Confounder	1.04 NS Confounder
Disability	1.12	1.44	1.21 Confounder	1.04 NS Confounder
Rural	1.06 NS Confounder	1.29 Confounder	1.13 Confounder	0.94 NS Confounder
Fully Adjusted Model	1.07 NS	1.33	1.14 NS	.89

Summary Table for Hypothesis 2.2

Table 1.3: Hypothesis 2.2: Adjusted Odds Ratio for Ease of Outcome by Race (White vs Nonwhite)

	Odds Ratio for Ease of Outcome in Whites versus Non Whites			
Adjustment Covariates	Doctor explanations	Obtaining care, tests, or treatment	Getting specialist appointment	Obtaining prescription drugs
Unadjusted	1.68	2.32	1.94	2.01
Adjusted For:				
Race	1.68	2.32	1.94	2.01
Gender	1.67	2.32	1.92	2.03
Education	1.65	2.29	1.92	1.95
Age	1.67	2.18	1.81	1.94
General Health Status	1.63	2.25	1.86	1.95
Comorbidities	1.69	2.34	1.93	2.02
Proxy	1.46 confounder	2.16	1.85	1.94
Dual Status	1.49 confounder	2.05	1.71 confounder	1.90
Disability	1.65	2.17	1.83	1.94
Rural	1.64	2.21	1.87	1.96
Fully Adjusted	1.26	1.74	1.51	1.75

Model				

Summary Tables of Hypothesis 2.3

Table 1.4: Hypothesis 2.3: Adjusted Odds Ratios for Ease of Outcome by Age (65 or older vs. less than 65)

	OR for Ease of Outcome 65 or older vs. less than 65			
Adjustment Covariates	Doctor explanations	Obtaining care, tests, or treatment	Getting specialist appointment	Obtaining prescription drugs
Unadjusted	1.32	2.17	1.86	1.70
Adjusted For:				
Race	1.25 confounder	1.99	1.73	1.60
Gender	1.32	2.16	1.85	1.70
Education	1.31	2.16	1.87	1.73
Age	1.32	2.17	1.86	1.70
General Health Status	1.09 confounder	1.86 confounder	1.62 confounder	1.46 confounder
Comorbidities	1.31	2.16	1.86	1.70
Proxy	1.40 confounder	2.19	1.89	1.87 confounder
Dual Status	1.11 confounder	1.85 confounder	1.60 confounder	1.56 confounder
Disability	1.15 NS confounder	1.47 confounder	1.73	1.32 confounder
Rural	1.32	2.19	1.87	1.72
Fully Adjusted Model	0.95 NS	1.36	1.56	1.33

Table 1.5: Hypothesis 2.3: Adjusted Odds Ratios for Ease of Outcome by Age (75 or older vs. younger than 75)

	OR of Ease of Outcome in 75 or older vs. less than 75			
Adjustment Covariates	Doctor explanations	Obtaining care, tests, or treatment	Getting specialist appointment	Obtaining prescription drugs
Unadjusted	.98	1.55	1.37	1.22
Adjusted For:				
Race	.96 NS confounder	1.48	1.32	1.22
Gender	.99 NS	1.56	1.38	1.25

Education	.99 NS	1.54	1.37	1.29 confounder
Age	.98 NS	1.55	1.37	1.22
General Health Status	.95 NS confounder	1.53	1.33	1.22
Comorbidities	.98 NS	1.55	1.36	1.26
Proxy	1.06 NS confounder	1.59	1.34	1.39 confounder
Dual Status	.94 confounder	1.46	1.29 confounder	1.22
Disability	.89 confounder	1.21 confounder	1.14 confounder	1.06 NS confounder
Rural	.99 NS	1.58	1.38	1.28 confounder
Fully Adjusted Model	.96 NS	1.27	1.11	1.15

Summary Tables of Hypothesis 2.4

Table 1.6: Hypothesis 2.4: Adjusted Odds Ratios for Ease of Outcome by Gender (Male vs. Female)

	OR for Ease of Outcome in Males versus Females			
Adjustment Covariates	Doctor explanations	Obtaining care, tests, or treatment	Getting specialist appointment	Obtaining prescription drugs
Unadjusted	1.06	1.09	1.16	.89
Adjusted For:				
Race	1.03 NS confounder	1.04 NS confounder	1.12 confounder	.85 confounding
Gender	1.06 NS	1.09	1.16	.89
Education	1.01 NS confounder	1.07 confounder	1.15	.88
Age	1.06	1.09	1.16	.91
General Health Status	1.03 NS confounder	1.07 confounder	1.13 confounder	.87 confounding
Comorbidities	1.07	1.10	1.16	.89
Proxy	1.13 confounder	1.09	1.16	.91
Dual Status	.97 NS	.99 NS	1.06	.85

	confounder	confounder	confounder	confounder
Disability	1.07	1.09	1.15	.90
Rural	1.06	1.09	1.16	.89
Fully Adjusted Model	.99 NS	.99 NS	1.04 NS	.84

Table 1.7: Hypothesis 2.4: Adjusted Odds Ratios for Ease of Outcome by Insurance Type (females in MA vs. Females in FFS)

	OR of Ease of Outcome in females by Insurance Type			
Adjustment Covariates	Doctor explanations	Obtaining care, tests, or treatment	Getting specialist appointment	Obtaining prescription drugs
Unadjusted	1.13	1.42	1.15	.94
Adjusted For:				
Race	1.36 confounder	1.36	1.11 confounder	.89 confounder
Gender	1.13	1.42	1.15	.94 NS
Education	1.09 confounder	1.41	1.14	.93
Age	1.15	1.48	1.17	.97 NS confounder
General Health Status	1.19 confounder	1.51 confounder	1.20 confounder	.99 NS confounder
Comorbidities	1.14	1.42	1.15	.94 NS
Proxy	1.11	1.38	1.09 confounder	.87 confounder
Dual Status	1.14	1.46	1.16	.98 NS confounder
Disability	1.14	1.49	1.18 confounder	.98 NS confounder
Rural	1.09 confounder	1.33 confounder	1.11 confounder	.88 confounder
Fully Adjusted Model	1.12	1.39	1.10	.88

Curriculum Vitae: Memuna Ifedirah

5703 Forbes Avenue • Pittsburgh, PA 15217 • 410-493-9849
mifedira@jhsph.edu

Experience

2010-Present Centers for Medicare and Medicaid Services
Baltimore, MD
Social Science Analyst – *Center for Medicare Management (CM) - Division of Consumer Assessment and Plan Performance*

- Oversees the implementation and evaluation of the Star Ratings and health plan performance.
- Serves as a Contracting Officer Technical Representative (COTR) for administering the Quality Bonus Payment Program to over 600 health plans nationally.
- Controls an annual budget of over 5 million dollars to assess the effectiveness of CMS'health plans quality reporting activities.
- Oversees the development of performance measures for Medicare Advantage plans.
- Conduct analytical studies of quality issues and topics necessary for design and implementation of health plans quality measurement and public reporting projects.
- Researches background information in order to make effective policy recommendations.
- Represents the division at briefings, hearings and other meetings throughout CMS and at other levels in Government and with CMS contractors, customers and partners regarding the justification, approval and ongoing operation of specific projects.
- Provides information and justification on the operational aspects of specific policies and projects that are being proposed.
- Conducts formative research and product testing to inform the public regarding quality information for health plans, nursing homes, home health agencies, dialysis facilities, hospitals, prescription drug plans, and physicians.
- Participates in rule writing and responding to comments.

2007-2010 Centers for Medicare and Medicaid Services

Public Health Analyst – *Office of Clinical Standards and Quality (OCSQ – Division of Hospital and Medication Measures*

- Serve as a COTR on projects related to the development and/or implementation of quality measurement and quality reporting efforts in the hospital and inpatient settings.
- Responsible for writing the inpatient and outpatient prospective payment systems rules.
- Develop and Implement policies for the hospital pay-for-reporting program and value based purchasing.
- Read, research and analyze legislation and make recommendations to management.
- Conduct data analysis and program related studies on hospital quality of care for Medicare beneficiaries.
- Write and implement policies as they relate to the inpatient and the outpatient settings.
- Research and analyze payment policies affecting hospitals and hospital outpatient departments.
- Analyze and implement policy issues regarding Medicare beneficiaries and hospital quality of care.
- Serves as the main liaison between CMS and stake holders such as the Hospital Quality Alliance
- Chairs the Hospital Compare Workgroup meetings.
- Prepares briefing documents and make oral presentations to division director, deputy director and group director.
- Represents CMS on the interagency workgroup for healthcare quality and disparities.

2003-2007 National Institutes of Health
Bethesda, MD

Public Health Advisor – *Center for Population Research*

- Develops, implements, and manages public health programs in strengthening capacity building with grantees in developing countries.
- Provides technical advice, leadership and assistance to international organization or grantees to carry out research programs.
- Manages grants/cooperative agreements and comparable funding sources for contracts.
- Serves as principal representative and provides management and operations advice and assistance to international organization and grantees.
- Manages, coordinates, and evaluates all aspects of complex public health programs as well as personnel and workforce development issues.
- Support health programs in various locations in in developing countries by developing strategies, analyzing data; and providing assistance and advice on health issues.
-

2001-2003 International Centers for the Exploration of Seas
Copenhagen, Denmark

Program Analyst

- Performs analyses of fishing sector trends relating to Denmark, to inform senior management and program managers of relevant factors that may affect the Danish fishing quota program.
- Sets program performance benchmarks and monitors and evaluates program implementation.
- Identifies and delivers solutions to technical problems and issues that arise during program design and implementation.
- Provides technical advice and support to the Health Transformation program.
- Performs strategic analysis of health system trends, and considers future opportunities, as input to program strategic planning.

Education
Johns Hopkins School of Hygiene and Public Health
Baltimore, MD
Doctor of Public Health (concentration in Healthcare Management and Leadership – Candidate): Spring 2015

Tulane University School of Public Health and Tropical Medicine
New Orleans, LA
Masters in Public Health (concentration in Health Systems Management and Policy): May 2001

- American College of Healthcare Executives

DePauw University
Greencastle, IN
Bachelor of Arts, Biology, May 2000

- Dean's List, Full Tuition African American Leadership Scholar, Gallop Scholar, Merit Scholar
- The De Pauw International Students' Association (Secretary), Women in Science, The De Pauw Community Service Association